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BOEING VERTOL CO PHILADELPHIA PA  
CH-46 COMPOSITE ROTOR BLADE FLIGHT STRESS SURVEY DATA, VOLUME I--ETC(U)  
JUL 78 R AIELLO, J BENDO  
D210-11168-3-VOL-1

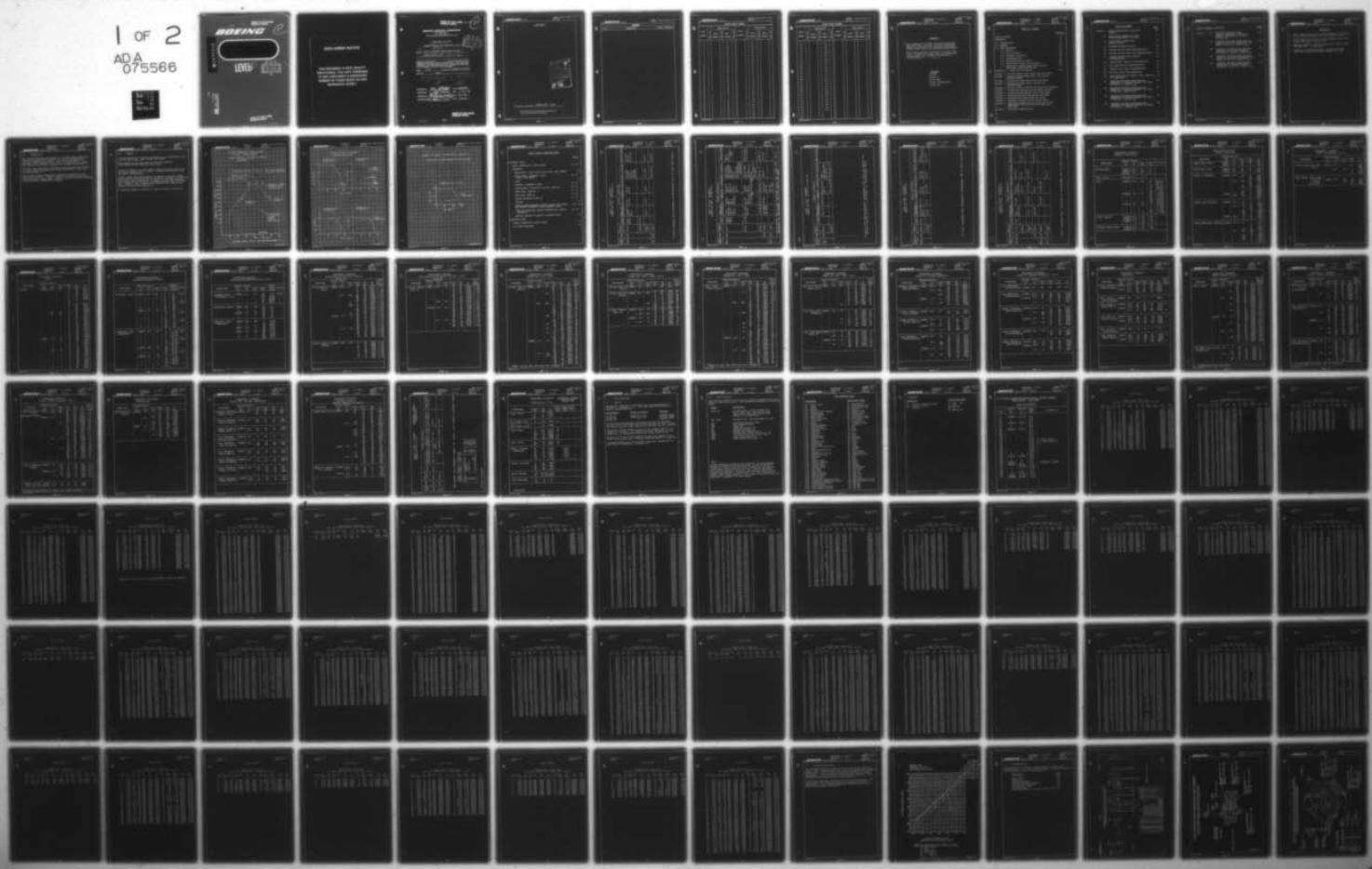
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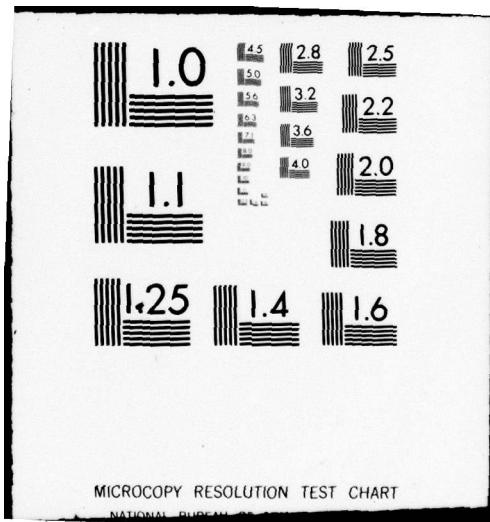
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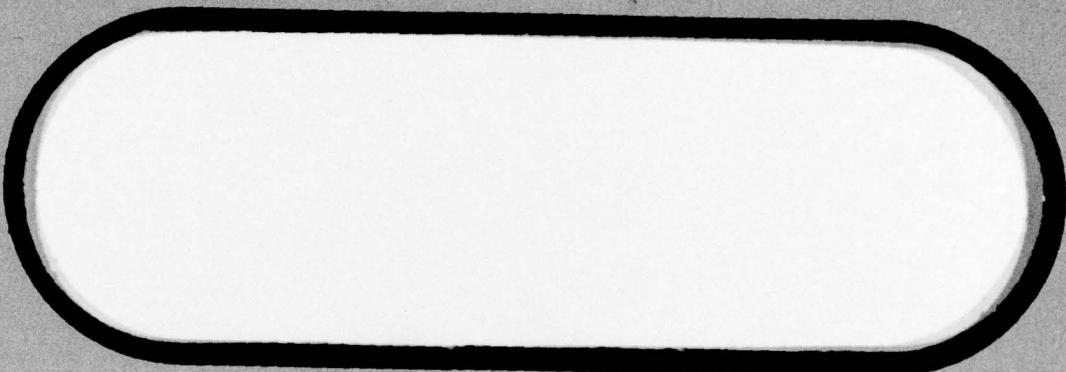


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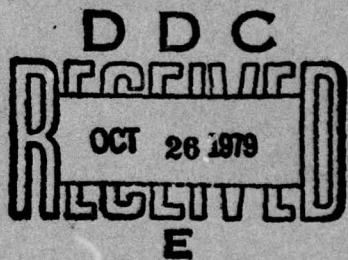
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STRESS SURVEY DATA, Volume I

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OCT 26 1979  
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29				59				89				
30				60				90				

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94				124							
95				125							
96				126							
97				127							
98				128							
99				129							
100				130							
101				131							
102				132							
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113				143							
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116				146							
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118											
119											
120											

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→ This document (13 Volumes) presents plotted and tabulated flight data for all stress parameters measured during the CH-46 composite rotor blade flight stress survey and structural demonstration.

This volume contains a description of test conditions, a summary of flight logs, calibrated blade section moduli and a complete description of instrumentation. → to pg 12

KEYWORDS

CH-46E  
Composite  
Rotor Blade  
Flight Stress Survey  
Flight Log

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REFERENCES

1. Vertol Report D210-11168-1 "CH-46 Composite Rotor Blade Flight Test Qualification Test Plan" March 30, 1977
2. Vertol Report D210-11168-2 "CH-46 Composite Rotor Blade Flight Test Report" May 15, 1978
3. NAVAIR 01-250HDC-1, NATOPS Flight Manual, Model H-46E, June 30, 1977 (Preliminary)
4. 107M-T-167.8 "CH-46 Helicopter Stress Survey Data, Metal Spar Productions Blades" November 29, 1966

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## 1.0 INTRODUCTION

This document contains the results of a flight stress survey and structural demonstration conducted on a CH-46 helicopter with A02R1702 composite rotor blades. The test was conducted in accordance with Paragraphs 4.3.2 and 4.7 of Reference 1. General test description and pilot comments are included in Reference 2.

The tests were conducted at the Boeing Vertol Flight Test Facility at Ridley Township, Pennsylvania during the period of June 1977 through November 1977.

This volume contains descriptive information pertinent to the flight stress survey. Volumes 2 through 12 contain plotted and tabulated stress survey data. Volume 13 contains all data pertinent to the structural demonstration program.

## 2.0 SUMMARY

A flight stress and structural demonstration was conducted on the #1 CH-46E Helicopter, BuNo. 153372 (S/N 2268).

The components under test were the A02R1702 composite rotor blades and the A02R1710 blade socket.

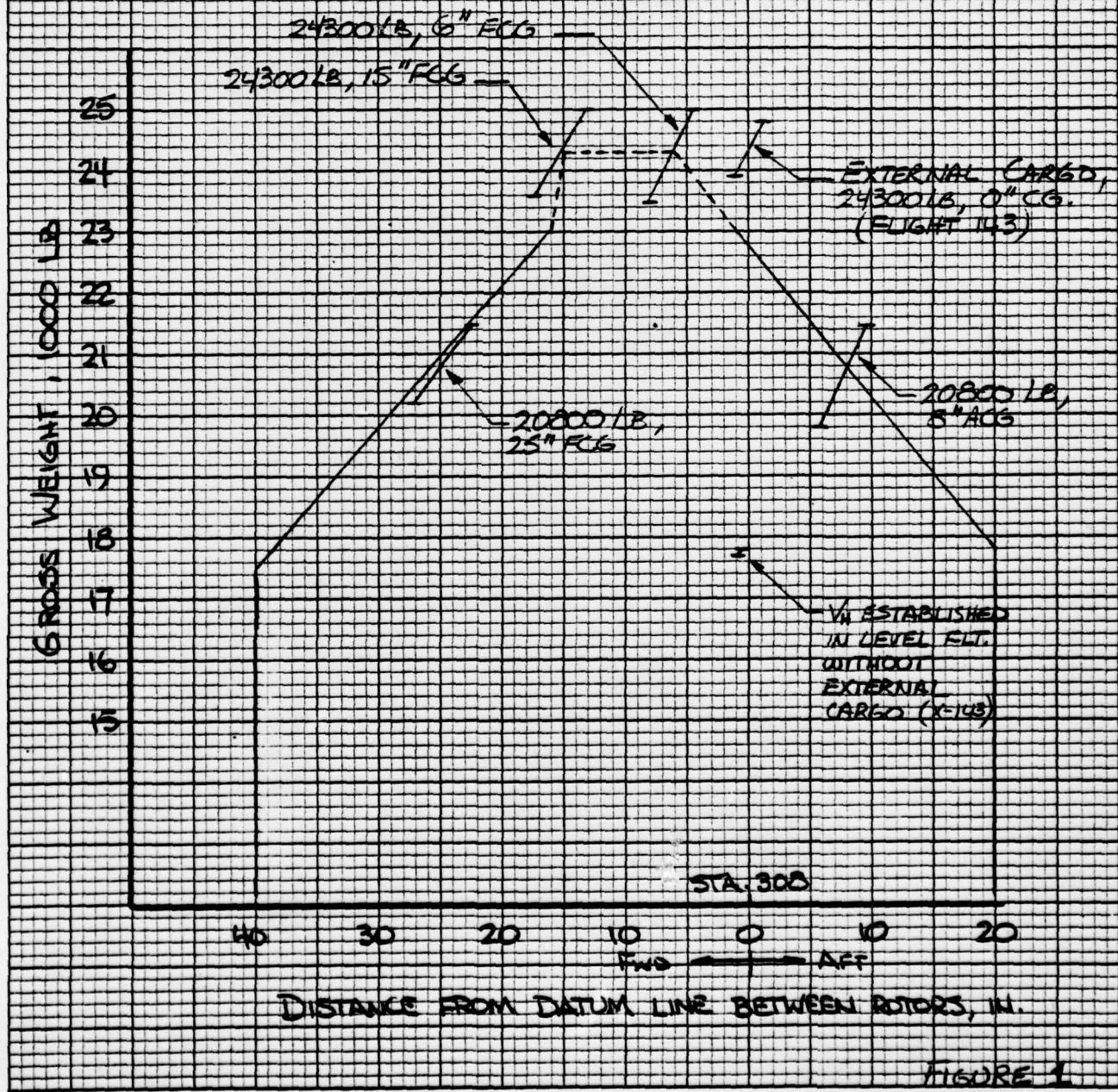
Volumes 1 through 12 of this report contain the test results for the flight stress survey. Volume 13 contains the results of the structural demonstration.

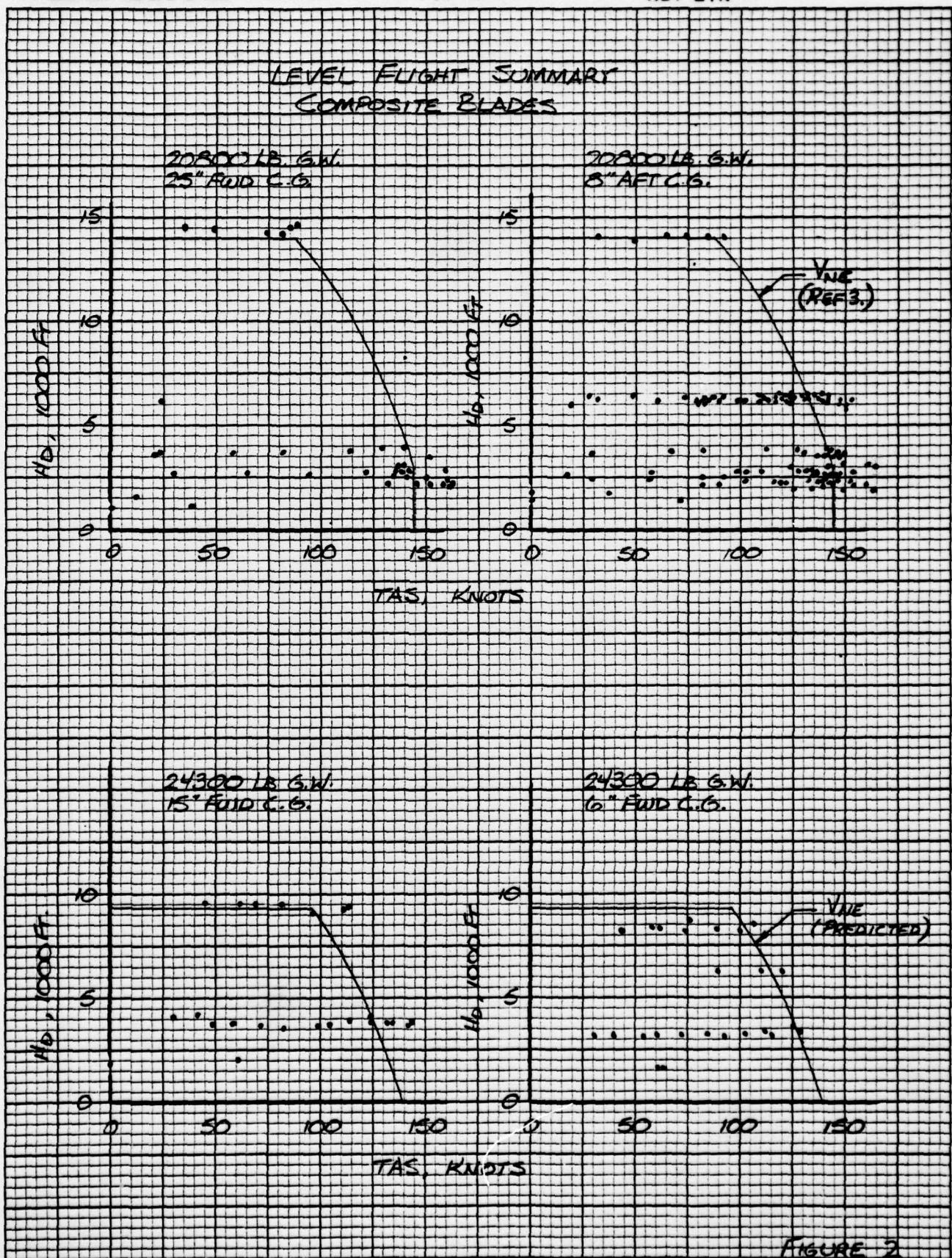
Figure 1 shows the gross weights and centers of gravity tested. The alternate gross weight for the CH-46E is increased to 24300 lbs. Test data at this gross weight is used to qualify the composite rotor blade for the CH-46D at its alternate gross weight of 23000 lbs. Figures 2 and 3 summarize the extent of the level flight testing for each gross weight/c.g.

A tabulated summary of testing is shown on Pages 17 through 44.

CH-46 COMPOSITE ROTOR BLADE  
FLIGHT STRESS SURVEY  
GROSS WEIGHT / CENTER OF GRAVITY  
SUMMARY

DESIGNS RANGE OF TESTING. C.G. SHIFTS FORWARD  
WITH FUEL BURNOFF





## LEVEL FLIGHT SUMMARY, CONT'D

EXTERNAL CARGO (COMPOSITE BLADES)

24300 LB G.W., 0" C.G.

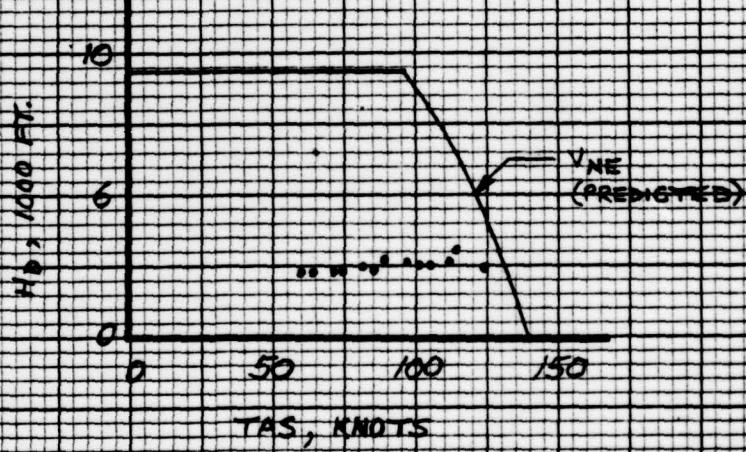


FIGURE 3

LEVEL FLIGHT & MANEUVER INDEX

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LEVEL FLIGHT SUMMARY  
20800 LB. GW., 25" FWD C.G.

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CYCLE TRIM	RPM	TARGET HD, FT	FLIGHT CONDITION				ABOVE 105% VNE
			HOVER	TRANSITION (5 TO 60 FT)	60 FT. TO 70% VNE	70% TO 80% VNE	
Pro. 264	2000	114-2 116-29	114-19, 11, 12 115-1 161-2	114-13 161-3, 4	114-14 161-5	114-15, 16 115-60 161-6, 7 162-2, 3 163-8, 18	114-17, 18 161-8 162-4, 5, 6
	6000	115-47					
	14000 D		115-17	115-16	115-15	115-14, 18	115-19
Ext. 264	2000					163-19 to 21	163-22

▷ FOUR EXTENDED TRIM. CONSIDERED AS PROGRAMMED TRIM AT 6000' AND ABOVE.

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LEVEL FLIGHT SUMMARY  
20800 LB G.W., 8" AFT C.G.

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FLIGHT CONDITION					
CYCIC TRIM	RPM	TARGET HD, FT	HOVER	TRANSITORY (5 to 60 sec.)	60% to 70% Vne
PROB. 264	2000	122-3/1 126-3 138-3	124-2 126-2,8 138-1,2 151-2 136-14	126-9,10 128-2 136-1 138-8 151-3,4,5 166-5	126-11,12 128-4 136-2,3,4 138-9 151-6,7 166-2,6,7,8 177-19,20,22,24,25, 35,37,38,40,41
					126-13 to 16 128-5,7,8,13,14 136-5,7,9,28 138-10,11 151-8
					127-6 137-8,10,14,15 139-13 151-17,26,27 □ 177-3,4,10
6000	124-54	124-52,53 137-2,3	124-43 127-2	124-44 127-5	124-45 to 48 127-6
					137-5,6 151-14 to 16,24,25
					139-13 151-17,26,27 □ 177-3,4,10
14000			124-22 □	124-21 □	124-15,16 □
					124-17 □
248 6000			124-58,59 137-19,20	124-61,62 137-18	124-63 137-21,22
RET. 264 6000				127-3,4 137-23,24	

□ FLIGHTS 124 & 151 ARE AT FULLY EXTENDED CYCLIC TRIM WHERE NOTED. THIS IS  
CONSIDERED AS PROGRAMMED TRIM AT 6000' HD AND ABOVE.

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LEVEL FLIGHT SUMMARY  
20000 LB G.W. , 8" AFT C.G. (cont'd)

CYCLIC TRIM	RPM	TARGET H.D. FT	FLIGHT CONDITION			
			HOVER	TRANSITION (STO 6000')	CONT. TO 70% VNE	70% TO 90% VNE
EXT. 264 □	2000	136-11,13	136-12,15 to 18	136-19,20,29 166-9	128-11 136-12,22,24,26 166-10,11	90% TO 105% VNE
	6000				137-7,12,13 □	105% VNE ABOVE 105% VNE 137-9,11,16 □

⇒ CYCLIC TRIM RANGES BETWEEN "PROGRAMMED" AND "FULLY EXTENDED." THE DATA AT 6000' H.D. (X-137) IS CONSIDERED AS PROGRAMMED TRIM.

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LEVEL FLIGHT SUMMARY  
24300 LB. G.W., 15° FWD C.G.

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CYCLE TRIM	TARGET HD, FT.	HOVER	FLIGHT CONDITION			
			TRANSITION (5 to 60%)	60% to 70% VNE	70% to 90% VNE	90% to 105% VNE
PROS. 264	2000	121-2	119-2, 10703 121-3	119-3, 9	119-5 121-57	119-6, 7 121-59
	8000	121-18		121-17	121-15, 16	121-12 121-13, 14

▷ FULLY EXTENDED TRIM. CONSIDERED AS PROGRAMMED TRIM AT 6000' AND ABOVE.

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LEVEL FLIGHT SUMMARY  
24300 LB. G.W., 6" FWD C.G.

FLIGHT CONDITION					
CYCLOC TRIM	RPM	TARGET HD, FT.	HOVER	TRANSITION (5 to 60K)	10% to 90% VNE 105% VNE ABOVE 105% VNE
PROG. 264	2000	140-1	141-2 142-2 to 6	142-7,8 142-9,10,11	141-53 142-12,13
		6000			141-50 141-51
		8000	141-25	141-23,24 141-13,18,19	141-20,21
248	2000		142-17,18		142-16 142-19,20
RTR. 264	2000			142-21,22 142-23 to 26	
EXT. 264	2000	▷			142-15

▷ FULLY EXTENDED TRIM. CONSIDERED AS PROGRAMMED TRIM AT 6000' AND ABOVE.

MANEUVER SUMMARY,  
GROUND CONDITIONS

MANEUVER	NOMINAL G.W., LB	NOMINAL C.G., IN	FLIGHT No.	EVENT No.	COMMENTS
ROTOR START	20800 20800 24300	25 F 8 A 6 F	114 177 167	9 2 3	
FLAT PITCH	24300	15 F	117	1	
TAXI	20800 24300 24300 24300	8 A 15 F 6 F	122 117 140	40 41 42 43 44 45 23 24 25 26 27 10 11 12 45 46	STRAIGHT L. TURN R. TURN STRAIGHT R. TURN L. TURN L. TURN R. TURN L. TURN R. TURN L. TURN R. TURN STRAIGHT R. TURN L. TURN R. TURN L. TURN
JUMP TAKEOFF	20800 24300 24300	8 A 15 F 6 F	122 117 140 167	30 17 43 4	
BRAKED ROTOR STOP	20800 24300	8 A 6 F	177 167	46 15	

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MODEL NO.MANEUVER SUMMARY  
HOVER MANEUVERS

MANEUVER	NOMINAL G.W., LB	NOMINAL C.G., IN	FLIGHT NO.	EVENT NO.	HO, FT.
HOVER RIGHT TURN	20800 24300	8 A 6 F	122 140	33 3	1727 1250
HOVER LEFT TURN	20800 24300	8 A 6 F	122 140	32 2	1725 1230
HOVER LAT. REVERSAL	20800  24300	25 F  8 A  15 F 6 F	114 115  122 124 126 138 117 140	3 48 49 34 35 55 4 5 4 19 4 5	995 6249 6257 1788 1761 6612 3554 3537 2688 1820 1290 1270
HOVER LONG. REVERSAL	20800  24300	25 F  8 A  15 F 6 F	114 115  122 124 126 138 117 140	4 50 36 37 56 6 5 20 6	1041 6228 1762 1778 6662 3542 2715 1820 1270
HOVER DIRECTIONAL REVERSAL	20800	25 F  8 A	114 115  122 124 126 138	5 6 7 51 38 39 57 7 6 7	1034 1014 1007 6243 1743 1751 6703 3537 2759 2750

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HOVER MANEUVERS, CONT'D

MANEUVER	NOMINAL G.W., LB	NOMINAL C.G., IN	FLIGHT No.	EVENT No.	H.D., FT.
HOVER DIRECTIONAL REV., CONT'D	24300	15 F	117	21	1820
		6 F	140	7	1270
				8	1250
				9	1240
RAPID ACCEL. FROM HOVER: 0 → 130 KTS 0 → 130 KTS 130 → 137 KTS	20800	8 A	122 138	24 34 35	1745 3134 3185

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MANEUVER SUMMARY,  
CLIMB

MANEUVER	NOMINAL G.W., LB	NOMINAL C.G. IN	FLIGHT No.	EVENT No.	TAS, KTS.	H <sub>D</sub> , FT.
CLIMB	20800	25 F	115	2	85	2377
				3	82	3444
				4	83	4159
				5	74	5165
				6	77	6481
				7	87	7505
				8	90	9767
				9	81	10952
				10	82	11872
				11	84	12528
				12	83	13650
				13	76	3817
				14	66	4753
				15	71	5767
				16	74	6631
				17	66	7698
				18	76	8648
				19	75	9847
				20	65	10868
				21	76	11784
				22	63	12734
				23	67	13634
				24	63	14083
				25	86	3163
				26	81	3968
				27	77	4843
				28	77	6294
				29	70	7224
				30	72	8223
				31	68	1836
				32	82	2735
				33	74	3705
				34	65	4714
				35	63	5530
				36	72	6787
				37	73	7690
				38	84	8470
				39	81	8753

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MODEL NO.MANEUVER SUMMARY,  
SIDEWARD & REARWARD FLIGHT

MANEUVER	NOMINAL G.W., LB	NOMINAL C.G., IN.	FLIGHT No.	EVENT No.	GROUND SPEED, KNOTS	DIRECTION
SIDEWARD, STEADY	20800	8A	122	2 4 6 8 10 12 14 16 18 20 22 24 26 28 30	10 20 30 35 10 20 30 35 35 10 20 30 35 10 20 30 35	LEFT ↓ RIGHT ↓ LEFT ↓ RIGHT ↓
SIDEWARD, ACCEL. & RECOVERY	20800	8A	122	3 5 7 9 11 13 15 17 28 29 30 31	10-20 20-30 30-35 35-0 10-20 20-30 30-35 35-0 0-35 35-0 0-35 35-0	LEFT ↓ RIGHT ↓ LEFT ↓
	24300	6F	140	117	14 16 18 20 22	0-10 10-20 20-30 30-35 35-0
	24300	15F				
	24300	6F				
					CONT'D	

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SIDEWARD & REARWARD FLIGHT, CONT'D

MANEUVER	NOMINAL G.W., LB	NOMINAL C.G., IN	FLIGHT NO.	EVENT NO.	GROUND SPEED, DIRECTION KNOTS
SIDEWARD, ACCEL. & RECOVERY, CONT'D	24300	6 F	140	23 25 27 29 31	0-10 RIGHT 10-20 20-30 30-35 35-0
REARWARD, STEADY	20800	8 A	122	18 20 22	10 20 30
	24300	6 F	140	33 35 37	10 20 30
REARWARD, ACCEL. & RECOVERY	20800	8 A	122	19 21 23	10-20 20-30 30-0
	24300	15 F	117	32 33	0-30 30-0
	24300	6 F	140	32 34 36 38	0-10 10-20 20-30 30-0

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MODEL NO.

MANEUVER SUMMARY,  
LONGITUDINAL & COLLECTIVE PULLUPS,  
POWER ON

MANEUVER	NOMINAL G.W., LB	NOMINAL C.G., IN	FLIGHT NO.	EVENT NO.	TAS, KTS.	HGT, FT	TYPE & LOAD FACTOR
PULLUP, 3000' HGT NOMINAL	20800	25 F	116	8	85	3478	L, 1.49
				9	83	3507	C, 1.61
				10	118	3806	L, 1.55
				11	129	3875	C, 1.45
		8 A	126	22	87	3638	L, 1.51
				23	85	3728	C, 1.07
				24	85	3805	C, 1.51
				35	127	3662	L, 1.61
				127	11	3554	L, 1.35
				138	20	2353	L, 1.50
				21	126	2583	C, 1.60
				28	95	2654	L, 1.42
				29	88	2718	C, 1.62
				36	141	2286	C, 1.61
	24300	15 F	119	27	62	3419	L, 1.26
				28	77	3327	L, 1.31
				29	72	3310	C, 1.47
				30	71	3326	C, 1.51
				37	113	3924	L, 1.41
				38	112	3913	C, 1.41
		6 F	142	36	114	3339	L, 1.30
				37	112	3325	C, 1.36
				38	116	3305	C, 1.44
				46	81	3232	L, 1.37
				47	79	3270	C, 1.50
PULLUP, 6000' HGT NOMINAL	20800	8 A	139	6	80	5812	L, 1.07
				7	90	5828	L, 1.30
				8	79	5939	L, 1.36
				9	81	5738	C, 1.07
				10	86	5762	C, 1.49
				17	117	6059	L, 1.18
				18	111	5990	C, 1.29
				19	112	5967	C, 1.44

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MODEL NO.MANEUVER SUMMARY,  
LONGITUDINAL & COLLECTIVE PULLUPS, CONT'D  
POWER ON

MANEUVER	NOMINAL G.W., LB	NOMINAL C.G., IN	FLIGHT No.	EVENT No.	TAS, KTS.	HD, FT.	TYPE & LOAD FACTOR
PULLUP, ABOVE 6000' HD	20800	25 F	115	34 35 36 37 38 39 40	69 67 75 78 71 78 82	14559 14615 14581 14675 14500 14609 14726	C, 1.05 C, 1.22 C, 1.24 C, 1.24 L, 1.17 L, 1.16 L, 1.19
		8 A	124	30 31 32	68 76 73	14096 14017 14012	L, 1.15 C, 1.24 C, 1.31
	24300	15 F	121	24 25 26 35 36 37	103 97 96 60 65 64	9488 9418 9452 9303 9431 9525	L, 1.23 C, 1.32 C, 1.31 L, 1.16 C, 1.29 C, 1.31
		6 F	141	33 34 37 38	91 88 66 58	8436 8316 8145 8167	L, 1.20 C, 1.21 L, 1.12 C, 1.28

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MANEUVER SUMMARY  
POWER ON RIGHT TURN

MANEUVER	NOMINAL G.W., LB	NOMINAL C.G., IN	FLIGHT NO.	EVENT NO.	TAS, KTS.	H <sub>0</sub> , FT.	BANK ANGLE, DEG.
R. TURN, 3000' H <sub>0</sub> NOMINAL	20800	25 F	114	20	90	3777	34
				23	87	3717	45
				25	77	3704	57
			116	3	40	3510	30*
				5	52	3722	45*
				7	61	3574	60*
				13	132	3812	30*
				15	129	3847	30*
		8 A	126	17	63	3667	35
				19	59	3869	29
				21	47	4012	43
				26	90	3637	37
				28	80	3567	51
				30	80	3661	54
			138	17	137	2656	31
				19	129	2495	37
				30	94	2574	33
				33	95	2840	50
				139	43	3061	28
				45	42	3213	39
				151	10	2358	34
				12	123	2342	37
			177	29	101	2099	50
				31	93	2028	60
				32	55	2143	50
				34	144	2372	35
	24300	15 F	119	20	54	3732	33
				22	51	3671	32
				23	74	3533	32
				26	74	3365	43
				32	115	3867	33
				33	112	3949	34
		6 F	141	55	124	3124	22
			142	28	114	3240	31
				30	113	3160	36
				43	82	3000	34
				45	77	3043	44
				49	62	3152	32
*TARGET VALUES, ROLL ATTITUDE GYRO INOPERATIVE							

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POWER ON RIGHT TURN, CONT'D

MANEUVER	NOMINAL G.WI., LB.	NOMINAL C.G., IN	FLIGHT No.	EVENT No.	TAS, KTS.	HD, FT.	BANK ANGLE, DEG.
R.TURN, 3000' HD CONT'D	24300	6 F	167	11	84	2004	44
				13	85	1789	46
R.TURN, 6000' HD NOMINAL	20800	8 A	139	2	81	6016	31
				4	77	5947	40
				12	41	6012	27
				15	109	6379	28
				16	111	6460	28
			151	18	116	6237	29
				20	99	6131	43
				29	116	6217	30
R.TURN, ABOVE 6000' HD	20800	25 F	115	20	83	14713	12
		8 A	124	27	73	14028	28
	24300	15 F	121	19	73	13850	12
				23	60	14142	21
				19	96	9333	18
				34	67	9122	40
		6 F	141	27	93	8346	18
				35	61	8234	31

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MODEL NO.MANEUVER SUMMARY  
POWER ON LEFT TURN

MANEUVER	NOMINAL G.W., LB	NOMINAL C.G., IN	FLIGHT NO.	EVENT NO.	TAS, KTS.	HD, FT.	BANK ANGLE, DEG.
LEFT TURN, 3000' HD Nominal	20800	25 F	114	21	88	3657	38
				22	90	3685	50
				24	89	3714	56
			116	2	40	3546	30*
				4	48	3651	45*
				6	40	3528	60*
				12	129	3737	30*
				14	129	3865	30*
		8A	126	18	53	3644	39
				20	66	3979	46
				25	83	3628	33
				27	81	3631	45
				29	83	3634	58
			138	15	133	2680	NA
				16	133	2644	30
				18	126	2573	34
				31	91	2618	36
				32	92	2698	50
			139	42	41	2960	30
				44	46	3052	42
			151	9	111	2329	33
				11	122	2253	41
			177	28	89	2154	49
				30	89	2125	60
				33	54	2105	55
	24300	15 F	119	19	29	3621	35
				21	36	3789	47
				24	70	3439	36
				25	69	3386	46
				31	111	3740	30
				34	109	3820	37
		6F	142	27	110	3418	30
				29	109	3233	35
				42	74	3062	31
				44	74	3184	48
				48	49	3010	31
				67	78	2448	18
				68	79	2430	28
*TARGET VALUES, ROLL ATTITUDE GYRO INOPERATIVE							

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POWER ON LEFT TURN, CONT'D

MANEUVER	NOMINAL G.W., LB	NOMINAL C.G., IN	FLIGHT NO.	EVENT NO.	TAS, KTS.	HGT, FT.	BANK ANGLE DEG.
LEFT TURN, 3000' HD NOMINAL, CONT'D	24300	6 F	142	69 70 71 72 73 74 75 76 77 167	77 97 99 106 106 123 123 122 118 12	2393 2656 2708 2762 2743 2981 3017 2981 2940 1870	50 22 27 38 44 16 20 30 44 45
LEFT TURN, 6000' NOMINAL HD	20800	8 A	139	3 5 11 14 151	86 91 42 113 19	5955 5681 5928 6271 6203	31 39 27 23 31
				28 177	116 115 125 126	6225 6190 6086	35 29 30
LEFT TURN, ABOVE 6000' HD	20800 24300	25 F 8 A 15 F 6 F	115 124 121 141	25 26 20 24 20 33 26 36	82 73 69 59 95 65 82 55	13990 13994 13750 14191 9489 9015 8332 8049	15 31 17 21 30 38 15 28

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MANEUVER SUMMARY,  
POWER ON CONTROL REVERSALS

MANEUVER	NOMINAL G.W., LB	NOMINAL C.G., IN.	FLIGHT NO.	EVENT NO.	TAS, KTS.	H.D., FT.
LATERAL REVERSAL, 3000' H <sub>0</sub> NOMINAL	20800	25 F	116	18	132	3828
		8 A	126	22	141	3809
			31	128	3793	
			32	129	3769	
			138	22	141	2846
				25	140	2821
	24300	15 F	119	39	110	3896
				42	127	3863
		6 F	142	31	115	3300
				39	126	3188
LATERAL REVERSAL, 6000' H <sub>0</sub> NOMINAL	20800	8 A	139	22	110	6060
				23	108	6081
LATERAL REVERSAL, ABOVE 6000' H <sub>0</sub>	20800	25 F	115	30	84	14474
				31	89	14470
	24300	8 A	124	25	71	14044
		15 F	121	21	99	9544
				30	104	9373
		6 F	141	28	88	8341
LONG. REVERSAL, 3000' H <sub>0</sub> NOMINAL	20800	25 F	116	19	129	3778
				20	130	3781
		8 A	126	23	144	3744
			138	33	129	3825
				23	140	2821
	24300	15 F	119	40	132	2769
				43	107	3871
		6 F	142	45	126	3864
				32	126	3893
				40	115	3310
					126	3180

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MODEL NO.MANEUVER SUMMARY  
POWER ON CONTROL REVERSALS, CONT'D

MANEUVER	NOMINAL G.W., LB	NOMINAL C.G., IN.	FLIGHT NO.	EVENT NO.	TAS, KTS.	HD, FT.
LONG. REVERSAL, 6000' HD NOMINAL	20800	8 A	139	24	108	6070
LONG. REVERSAL, ABOVE 6000' HD	20800 24300	25 F 8 A 15 F 6 F	115 124 121 141	32 26 22 31 29	81 68 98 110 87	14498 14073 9538 9417 8329
DIRECT. REVERSAL, 3000' HD NOMINAL	20800 24300	25 F 8 A 15 F 6 F	116 126 138 119 142	21 24 34 24 27 41 44 34 41	131 146 128 140 133 109 127 115 132	3763 3706 3846 2822 2768 3835 3855 3390 3186
DIRECT. REVERSAL, 6000' HD NOMINAL	20800	8 A	139	25 26 27	108 113 113	6074 5974 5954
DIRECT. REVERSAL, ABOVE 6000' HD	20800 24300	25 F 8 A 15 F 6 F	115 124 121 141	33 27 23 32 30	83 70 97 107 87	14525 14099 9546 9421 8281

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MODEL NO.MANEUVER SUMMARY,  
SIDESLIPS

MANEUVER	NOMINAL G.W., LB	NOMINAL C.G., IN	FLIGHT NO.	EVENT NO.	TAS, KTS.	HGT, FT.	SIDE- SLIP †, DEG.
RIGHT SIDESLIP, 3000' HD NOMINAL	20800 24300	25 F 8 A 15 F 6 F	116 138 119 142	17 14 36 34	126 139 115 115	4040 2497 3828 3390	N.A. 12
RIGHT SIDESLIP, 6000' HD NOMINAL	20800	8 A	139	21	117	6200	
RIGHT SIDESLIP, ABOVE 6000' HD	20800 24300	25 F 8 A 15 F 6 F	115 124 121 141	29 29 29 32	82 71 96 88	14194 14102 9443 8365	N.A. 8
LEFT SIDESLIP, 3000' HD NOMINAL	20800 24300	25 F 8 A 15 F 6 F	116 138 119 142	16 13 35 35	127 127 106 110	3929 2628 3766 3408	N.A. 9
LEFT SIDESLIP, 6000' HD NOMINAL	20800	8 A	139	20	111	6141	
LEFT SIDESLIP, ABOVE 6000' HD	20800 24300	25 F 8 A 15 F 6 F	115 124 121 141	28 28 28 31	84 68 93 83	14007 14096 9443 8341	N.A. 9

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MODEL NO.MANEUVER SUMMARY,  
PARTIAL POWER DESCENT

MANEUVER	NOMINAL G.W., LB	NOMINAL C.G., IN.	FLIGHT NO.	EVENT NO.	TAS, KTS.	HD, FT.	RATE OF DESCENT, FPM ▷
P.P.D., STEADY	20800	25 F	115	21	71	14547	500
				22	73	14403	1000
				23	74	14095	1500
			116	25	113	3846	500
				26	116	3693	1000
				27	113	3432	1500
		8 A	124	33	62	14004	500
				34	63	13828	1000
				35	62	13542	1500
				127	7	5800	500
				8	111	5574	1000
				9	107	5258	1500
				139	28	6078	500
				29	110	5813	1000
				30	104	5400	1500
	24300	15 F	119	15	98	3860	500
				16	98	3626	1000
				17	103	3428	1500
			121	11	79	8935	300
				38	85	9080	500
				39	87	8754	1000
				40	80	8100	1500
		6 F	141	14	84	8597	500
				15	81	8385	1000
				16	84	8187	1500
			142	50	100	3275	500
				51	101	3090	1000
				52	101	2811	1500
P.P.D. RIGHT TURN (AUTOROTATION)	20800	25 F	115	43	79	12713	21
				53	69	4548	44
			116	31	134	4060	30
		8 A	124	38	69	13467	34
				72	69	7169	36
			139	33	107	5293	27
			177	17	89	5154	36

▷ BANK ANGLE SHOWN FOR TURNS

THE BOEING COMPANY

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MODEL NO.MANEUVER SUMMARY,  
PARTIAL POWER DESCENT, CONT'D

MANEUVER	NOMINAL G.W., LB	NOMINAL C.G., IN	FLIGHT NO.	EVENT NO.	TAS, KTS	HD, FT.	BANK ANGLE, DEG. ▷
P.P.D. RIGHT TURN, CONT'D (AUTOROTATION)	24300	15 F	119	48	107	3326	40
			121	43	85	8963	40
				48	91	8393	28
				52	72	3642	59
		6 F	141	40	76	7894	33
				47	90	6368	31
			142	55	64	2963	40
				61	115	3748	35
P.P.D. LEFT TURN (AUTOROTATION)	20800	25 F	115	42	70	13350	15
				52	68	5564	48
			116	30	125	3032	30
		8 A	124	39	72	12636	39
				73	87	6434	50
			139	34	109	4674	36
			177	16	90	5928	29
	24300	15 F	119	47	115	3867	31
			121	42	86	10136	40
				47	96	9751	31
				51	78	4300	58
		6 F	141	41	90	7126	39
				46	105	7430	19
			142	54	78	3553	45
				62	89	3270	47
P.P.D. RECOVERY (AUTOROTATION PULLUP)	20800	25 F	115	24	71	13768	1.09
				58	58	2236	1.49
			116	59	64	3556	1.81
				28	113	3212	1.31
				36	132	3433	1.93
			124	37	126	2648	1.82
		8 A		36	55	13339	1.08
				77	70	4459	1.83
				78	74	3967	1.78
			166	3	157	3778	2.35
				4	159	3725	2.48

▷ LOAD FACTOR (G's) SHOWN FOR P.P.D. RECOVERY

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PARTIAL POWER DESCENT, CONT'D

MANEUVER	NOMINAL G.W., LB	NOMINAL C.G., IN	FLIGHT No.	EVENT No.	TAS, KTS.	HD, FT.	LOAD FACTOR, G'S □
P.P.D. RECOVERY, CONT'D (AUTOROTATION PULLUP)	20800	8 A, CONT'D	138	36	101	1971	1.53
			139	35	105	4030	1.52
	24300	15 F	119	18	98	3248	1.24
				49	107	3869	1.48
				50	117	3538	1.80
				121	41	7875	1.16
					44	7649	1.61
					46	6812	1.59
					49	7376	1.45
					50	6913	1.64
					53	3011	1.91
					54	2722	1.74
		6 F	141		17	8028	1.15
					42	6196	1.52
					43	5601	1.63
					48	5687	1.42
					49	5297	1.50
				142	56	2060	1.53
					57	3086	1.69
					59	1694	1.36
					63	3749	1.44
					64	3358	1.74
					66	2313	1.50
SPIRAL DESCENT, STEADY	20800	8 A	124	79	80	3361	53 L
			139	41	114	4264	46 R
	24300	15 F	177	18	75	4645	46 L
			119	51	111	3024	48 L
			121	63	78	4410	65 L
		6 F	142	58	71	2892	52 L
				65	105	3153	48 R
CHANGE TO P.P.D., (FROM LEVEL FLT.)	20800	8 A	139	31	114	6464	
	24300	6 F	141	44	97	8536	

□ BANK ANGLE &amp; DIRECTION SHOWN FOR SPIRAL DESCENTS.

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AUTOROTATION

MANEUVER	NOMINAL G.W., LB	NOMINAL C.G., IN	FLIGHT NO.	EVENT NO.	TAS KTS.	HD, FT.	
AUTOROTATION, STEADY	20800	25 F	115	41	68	13572	
				54	74	3774	
		8 A	116	35	139	3769	
			124	37	68	13703	
				71	79	7404	
	24300	15 F	139	32	112	5531	
			177	15	88	6237	
		6 F	119	46	108	4172	
			121	45	89	7042	
			141	39	71	8157	
				45	101	7688	
				53	78	3754	
				60	122	3919	

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MODEL NO.MANEUVER SUMMARY,  
POWER OFF CONTROL REVERSALS

MANEUVER	NOMINAL G.W., LB	NOMINAL C.G., IN	FLIGHT NO.	EVENT NO.	TAS, Kts.	HD, FT.
LATERAL REVERSAL, 3000' HD NOMINAL	20800	25 F	115 116	55 32	69 133	3209 2977
LATERAL REVERSAL, 6000' HD NOMINAL	20800	8 A	124 139	74 37	75 104	5331 5359
LATERAL REVERSAL, ABOVE 6000' HD	20800	25 F 8 A	115 124	44 40	72 79	11558 11533
LONG. REVERSAL, 3000' HD NOMINAL	20800	25 F	116	33	133	2795
LONG. REVERSAL, 6000' HD NOMINAL	20800	8 A	124 139	75 38	68 108	5132 5081
LONG. REVERSAL, ABOVE 6000' HD	20800	25 F 8 A	115 124	45 41	74 76	11250 11313
DIRECT. REVERSAL, 3000' HD NOMINAL	20800	25 F	115 116	57 34	67 129	2868 2611
DIRECT. REVERSAL, 6000' HD NOMINAL	20800	8 A	124 139	76 39 40	64 109 110	4913 4861 4684
DIRECT. REVERSAL, ABOVE 6000' HD	20800	25 F 8 A	115 124	46 42	75 77	11024 11186

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MANEUVER SUMMARY,  
LANDING FLARE &  
VERTICAL DESCENT TO LANDING

MANEUVER	NOMINAL G.W., LB	NOMINAL C.G., IN	FLIGHT NO.	EVENT NO.	TAS, KTS	H.D., FT
FLARE, 2000' H.D. NOM.	20800	25 F	115	61	94	1620
			116	38	94	1780
				39	48	1750
				40	75	1609
				41	40	1524
		8 A	161	9	120	942
			122	25	72	2000
				26	46	1863
				27	74	1800
			124	80	70	1613
			126	36	74	1876
			127	12	55	1268
			139	46	65	2662
				47	81	2034
				48	56	1900
				49	64	1916
	24300	15 F	177	45	45	416
			117	34	52	1764
				35	28	1757
				36	49	1733
			119	52	62	1916
			121	64	79	2062
		6 F	140	39	53	1260
				40	32	1347
				41	71	1275
				42	67	1251
VERTICAL DESCENT TO LANDING	20800	25 F	116	42	0	1557
		8 A	122	28	91	1818
	24300	15 F	117	29	0	1708
		6 F	140	37	0	1761
				44	0	1250

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LEVEL FLIGHT SUMMARY  
24300 LB G.W., 0" C.G.  
EXTERNAL CARGO,  
FLIGHT 143

FLIGHT CONDITION					
CYCIC TRIM	RPM	TARGET HD, FT	HOVER	TRANSITION (60 to 60kts) (60 to 90kts)	70% to 90% VNE (90 to 115kts)
PROG. 264	2500	143-3	143-5,7,9	143-12,13,14, 16,28	143-17,18
EXT. □	2500			143-29,30,31	143-32,33,34 143-36

ADDITIONAL TEST RECORDS TAKEN ON FLIGHT 143 WITHOUT EXTERNAL LOAD;

GROSS WEIGHT = 17,800 LB  
CENTER OF GRAVITY = 0.20" FWD

EVENT	DESCRIPTION	TAS	H <sub>D</sub>
1	HOVER	0	1370
47	LEVEL FLT	127	3079
48	"	138	3019
49	"	147	3205
50	GUST SIMULATION	147	3203

▷ FULLY EXTENDED

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## MANEUVER SUMMARY

EXTERNAL CARGO,  
FLIGHT 143

24300 LB G.W., 0" C.G.

MANEUVER	EVENT NO.	TAS, KTS.	HD, FT	BANK ANGLE, DEG.	RATE OF DESCENT, FPM	LOAD FACTOR, G'S
LOAD PICK-UP	2	0	1400			
	4	0	1400			
	45	0	0			
RT. CLIMBING TURN	10	60	1522	12		
MAX. POWER CLIMB	11	60	1698			
RIGHT TURN	15	84	2479	16		
	21	105	2892	17		
	22*	106	3390	9		
	27	112	2389	23		
	38	108	2529	21		
LEFT TURN	26	104	2372	18		
	35	105	2504	17		
PARTIAL POWER DESCENT	23	72	2568		500	
	24	76	2414		1000	
	25	70	2272		1500	
	39	73	2283		500	
	40	70	2031		1000	
	41*	71	1909		—	1.21
FLARE TO HOVER	6	51	1384			
	8	59	1391			
	42	56	1476			
	43	50	1451			
SLOW DE-CEL.	20	120-100	3070			
	37	121-100	2498			
LOAD RELEASE	44	0	0			
	46	0	0			
*RECOVERY						

## 3. TEST PROCEDURES

## 3.1 General

Testing was conducted in accordance with the requirements of Reference 1, Paragraph 4.3.2. The gross weights and centers of gravity investigated are:

<u>Gross Weight</u>	<u>Center of Gravity</u>	<u>Comments</u>
20,800 lb.	25" Fwd & 8" Aft	Internal Cargo
24,300 lb.	15" Fwd & 6" Fwd	Internal Cargo
24,300 lb.	0"	External Cargo

At the end of the external load flight the load was discarded and four level flight data records were obtained at 3000'  $H_d$  from 127 knots to  $V_H$  at a gross weight of 17,800 lbs. and cg of .20" Fwd.

Variations of gross weight during test are normally  $\pm 500$  lb. of target G.W. Figure 1 (in Section 2.0) shows the range of gross weight and c.g. experienced during the flight stress survey.

Section 2.0 of this volume presents a quick-look summary of all level flight testing and a detailed tabulated summary of maneuvers.

A complete description of the flight conditions investigated on each flight is presented in Section 3.2.

## 3.2 Log of Flights

This section presents a list of basic aircraft parameters for each flight in the stress survey. The parameters presented are explained below:

<u>Symbol</u>	<u>Description</u>
Event No.	All event nos. in this document are "batch event nos." and do not necessarily agree with pilot flight card event no., see ▲ below
Man. Code	Maneuver Code. See next sheet for list.
IAS	Indicated Airspeed, Knots
TAS	True Airspeed, Knots
RPM	Rotor rpm
Hp	Pressure Altitude, Ft
Hd	Density Altitude, Ft
OAT	Outside Air Temperature, °C
FCYC	Forward Rotor Cyclic Trim Pos'n, Deg.
ACYC	Aft Rotor Cyclic Trim Pos'n, Deg.
RGW	Event Gross Weight, Lb
RCG	Event Center of Gravity, In.



In many instances, maneuvers were conducted in rapid sequence without re-triggering the event marker. A case in point is flight 115, "pilot" event 20, which includes four (4) partial power descent maneuvers which we wish to analyze separately. For batch processing of this data, four separate "batch event" numbers were assigned to "pilot event" 20. The conversions of pilot to batch event numbers for all flights (with edit times) are presented in Appendix A to this volume.

TEST MANEUVER CODESCATEGORIES

01 Level Flight  
 02 Hover  
 03 Climb  
 04 Descent  
 05 Partial Power Descent  
 06 Autorotation  
 07 Engine Start  
 08 Rotor Start  
 09 Rotor Shut Down  
 10 Ground Run  
 11 Taxi  
 12 Takeoff  
 13 Running Takeoff  
 14 Jump Takeoff  
 15 Sideward Flight  
 16 Rearward  
 17 Spot Turn  
 18 Landing  
 19 Acceleration  
 20 Deceleration  
 21 Flare  
 22 Landing Flare  
 23 Transition  
 24 Quick Stop  
 25 Service Ceiling Climb  
 26 Turn  
 27 Steep Climbing Turn  
 28 Pull Up  
 29 Symmetrical Pull Up  
 30 Rolling Pull Up  
 31 Pushover  
 32 Dive  
 33 Control Input  
 34 Control Reversal  
 35 Control Step  
 36 Control Pulse  
 37 Control Force  
 38 SAS Input  
 39 ASE Input  
 40 Boost Failure  
 41 Engine Failure  
 42 SAS Failure  
 43 ASE Failure  
 44 Continuous Takeup of Load  
 45 Continuous Reduction of Load  
 46 Steady Pull of Load  
 47 Cable Release  
 48 Wing Control Failure  
 49 Flap Control Failure

DESCRIPTIVE TERMS

01 Longitudinal  
 02 Longitudinal Fwd  
 03 Longitudinal Aft  
 04 Lateral  
 05 Lateral Left  
 06 Lateral Right  
 07 Directional  
 08 Directional Left  
 09 Directional Right  
 10 Collective  
 11 Collective Up  
 12 Collective Down  
 13 Forward  
 14 Aft  
 15 Left  
 16 Right  
 17 Up  
 18 Down  
 19 Entry  
 20 Recovery  
 21 Rearward  
 22 Slow  
 23 Rapid  
 24 Step  
 25 Pulse  
 26 Reversal  
 27 Force  
 28 Dual Engine  
 29 Single Engine  
 30 Sideslip or Yaw  
 31 IGE  
 32 OGE  
 33 Hover  
 34 Level  
 35 Climb  
 36 Descent  
 37 Autorotative  
 38 Single SAS  
 39 Dual SAS  
 40 Gear Up  
 41 Gear Down  
 42 Wing Up  
 43 Wing Down  
 44 Wing Xsition Dn to Up  
 45 Wing Xsition Up to Dn  
 46 SAS Off  
 47 60% VNE  
 48 70% VNE  
 49 90% VNE

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(Continued)

<u>CATEGORIES</u>	<u>DESCRIPTIVE TERMS</u>
50 Flaperon Control Failure	50 100% VNE
51 P.A.S.T. Failure	51 110% "
52 Sideslip	52 Mil Pwr
	53 V <sub>H</sub>
	54 Exceed Vne

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3.2 CONT'D CH-46 COMPOSITE BLADE FLIGHT STRESS SURVEY  
BuNo. 153372 S/N 2268

LOG OF FLIGHTS

FLIGHT NO.	NOMINAL G.W., LB	NOMINAL C.G., IN	FLIGHT DATE, 1977	COMMENTS
114	20800	25 FWD	8-2	
115			8-3	
116			8-3	
117	24300	15 FWD	8-4	
119			8-5	
121			8-8	
122	20800	8 AFT	8-9	
124			8-11	
126			8-11	
127			8-15	
128			8-18	
132			8-24	CYCLIC TRIM INVESTIGATION
133			8-25	
134			8-25	
135			8-26	
136			8-29	
137			8-29	
138			8-30	
139			8-30	
140	24300	6 FWD	8-31	
141			8-31	
142			9-1	
143	24300	0	9-2	EXTERNAL CARGO
151	20800	8 AFT	9-13	
161		25 FWD	9-30	
162			10-3	
163			10-4	
166			10-6	
167	24300	8 AFT	10-6	
177	20800	6 FWD	10-20	

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 114  
T8GW 20800 T8CG 22.4 FWD FLIGHT DATE 08/02/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	SAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
1	1000	0	0	259	53	1034	23			21450	22.40
2	2310	0	0	264	37	1013	23			21310	23.00
3	3404	0	0	264	37	995	23			21240	23.30
4	3401	0	0	264	68	1041	23			21170	23.60
5	3407	0	0	265	54	1034	23			21100	24.00
6	1726	0	0	264	38	1014	23			21030	24.30
7	1726	0	0	264	40	1007	23			20960	24.60
9	0828	0	0	264	68	1141	24			21500	22.40
10	2313	36	37	264	97	1122	23			21450	22.60
11	2313	22	23	264	2768	3753	17			21400	22.80
12	2313	54	57	265	2814	3809	18			21350	23.00
13	0148	79	83	263	2669	3703	18			21270	23.30
14	0149	108	114	264	2634	3781	19			21250	23.40
15	0150	122	129	264	2784	3961	19			21200	23.60
16	0150	132	140	264	2702	3895	19			21050	24.20
17	0154	145	152	264	2280	3529	21			21000	24.30
18	0154	151	159	264	1977	3296	22			20950	24.50
19	3220	141	148	264	1744	2980	22			20925	24.60
20	2616	85	90	264	2718	3777	18			20900	27.70
21	2615	83	83	263	2588	3657	19			20850	24.90
22	2615	85	90	264	2618	3685	19			20840	24.90
23	2616	83	87	261	2652	3717	18			20830	24.90
24	2615	84	89	264	2649	3714	18			20800	25.00
25	2616	72	77	263	2650	3704	19			20800	25.00

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 115  
T0GW 20800 T0CG 22.4 FWD FLIGHT DATE 08/02/77

EVENT NR	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
1	2313	13	13	264	20	1500	27			21500	22.40
2	0300	82	85	264	1041	2377	24			21475	22.50
3	0300	78	82	264	2247	3444	20			21450	22.60
4	0300	78	83	264	3041	4159	18			21425	22.70
5	0300	69	74	264	4175	5165	15			21400	22.80
6	0300	69	77	264	5300	6481	14			21375	22.90
7	0300	78	87	264	6405	7505	11			21350	23.00
9	0300	77	90	262	8369	9767	10			21300	23.20
10	0300	69	81	259	8389	10952	10			21275	23.30
11	0300	68	82	263	10336	11872	7			21250	23.40
12	0300	69	84	264	11038	12528	6			21225	23.50
13	0300	67	83	264	12058	13650	4			21210	23.60
14	0150	65	81	264	12729	14250	3			21200	23.60
15	0149	59	73	264	12752	14226	2			21150	23.80
16	0148	39	49	264	13035	14431	1			21100	24.10
17	2313	28	35	264	13145	14540	1			21050	24.20
18	0150	68	85	264	13093	14563	1			21000	24.30
19	0154	70	88	264	13144	14648	2			21000	24.30
20	2616	66	83	264	13258	14713	1			20950	24.50
21	0500	57	71	264	13101	14547	1			20970	24.40
22	0500	58	73	265	12969	14403	1			20950	24.50
23	0500	60	74	265	12702	14095	1			20930	24.60
24	0520	58	71	260	12355	13768	2			20910	24.70
25	2615	66	82	264	12552	13990	2			20900	24.70
26	2615	59	73	264	12577	13994	2			20900	24.70
27	2616	59	73	263	12576	14028	2			20850	24.90
28	5215	68	84	264	12544	14007	2			20825	25.00
29	5216	66	82	264	12705	14194	2			20800	25.00
30	3404	67	84	264	13012	14474	1			20790	25.00
31	3404	71	89	264	13010	14471	1			20785	25.10
32	3401	65	81	264	13061	14498	1			20780	25.10
33	3407	67	83	264	13062	14525	1			20770	25.20
34	2810	55	69	268	13125	14559	1			20750	25.30
35	2810	54	67	266	13171	14615	1			20750	25.30
36	2810	60	75	267	13143	14581	1			20750	25.30
37	2810	62	78	269	13213	14675	1			20750	25.30
38	2801	57	71	264	13104	14560	1			20750	25.30
39	2801	62	78	264	13145	14609	1			20700	25.50
40	2801	64	82	264	13298	14726	1			20650	25.70
41	0600	56	68	277	12116	13572	3			20600	25.90
42	2637	57	70	272	11884	13351	4			20580	25.90
43	2637	65	79	270	11205	12713	5			20560	26.00
44	0604	60	72	273	10072	11558	7			20540	26.00
45	0601	62	74	279	9770	11250	8			20520	26.10
46	0607	63	75	268	9549	11024	8			20510	26.10
47	0232	22	24	264	5139	6239	14			20500	26.20
48	3404	22	24	264	5140	6249	14			20490	26.20

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 115  
T8GN 20800 T8CG 22.4 FWD FLIGHT DATE 08/02/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (S)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
49	3404	23	25	263	5154	6257	14			20480	26.30
50	3401	24	27	264	5138	6228	14			20470	26.30
51	3407	35	39	263	5157	6243	14			20460	26.40
52	2637	63	68	273	4501	5564	15			20450	26.40
53	2637	65	69	265	3672	4548	15			20430	26.40
54	0600	70	74	266	2831	3776	17			20420	26.50
55	0604	66	63	277	2186	3209	19			20400	26.60
56	0601	66	69	273	1980	3028	20			20395	26.60
57	0607	64	67	273	1812	2868	20			20390	26.60
58	2837	56	58	293	1100	2236	22			20385	26.70
59	2837	61	64	278	2364	3356	18			20380	26.70
60	0150	131	137	264	1713	3075	23			20320	27.00
61	2200	92	94	265	111	1620	27			20250	27.20

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 116  
TGW 20800 TBCG 22.4 FWD FLIGHT DATE 08/02/77

EVENT NO	MAN CODE	IAS (KT)	TAG (KT)	RPM	HP (FT)	HD (FT)	SAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
2	2615	38	40	264	2439	3546	19			21450	22.70
3	2616	38	40	265	2395	3510	19			21425	22.80
4	2615	41	48	263	2539	3651	19			21400	22.80
5	2616	50	52	263	2604	3722	19			21380	22.90
6	2615	38	40	264	2395	3528	20			21350	23.00
7	2616	58	61	263	2440	3574	20			21300	23.20
8	2801	81	85	263	2347	3473	20			21300	23.20
9	2810	79	83	265	2364	3507	20			21250	23.40
10	2801	111	118	265	2571	3806	20			21230	23.40
11	2810	122	129	271	2634	3875	20			21215	23.50
12	2615	122	129	264	2492	3737	20			21200	23.60
13	2616	124	132	264	2554	3812	20			21180	23.70
14	2615	122	129	264	2619	3865	20			21170	23.70
15	2616	122	129	264	2618	3847	20			21150	23.80
16	5215	120	127	264	2686	3929	20			21125	23.90
17	5216	119	126	263	2817	4040	20			21110	24.00
18	3404	124	132	263	2552	3828	20			21100	24.00
19	3401	122	129	264	2526	3778	20			21080	24.10
20	3401	123	130	264	2521	3781	20			21070	24.10
21	3407	123	131	265	2506	3763	20			21060	24.20
22	3404	133	141	264	2522	3809	21			21050	24.20
23	3401	137	144	264	2441	3744	21			21035	24.20
24	3407	138	146	263	2395	3706	21			21020	24.30
25	0500	107	113	263	2669	3846	19			21000	24.30
26	0500	110	116	265	2508	3693	20			20990	24.30
27	0500	108	113	265	2215	3432	21			20980	24.40
28	0520	108	113	262	1970	3212	21			20975	24.40
29	0232	21	22	265	2409	3608	20			20970	24.40
30	2637	120	125	287	1728	3032	22			20940	24.50
31	2637	126	134	272	2800	4060	20			20910	24.60
32	0604	127	133	265	1633	2977	23			20880	24.70
33	0601	127	133	268	1397	2795	24			20850	24.80
34	0607	124	129	263	1197	2611	24			20820	24.90
35	0600	132	139	268	2461	3769	21			20790	25.00
36	2837	126	132	258	2121	3433	22			20760	25.10
37	2837	121	126	265	1255	2648	24			20730	25.20
38	2200	92	94	264	278	1780	27			20700	25.40
39	2200	47	48	266	340	1750	26			20620	25.70
40	2200	73	75	268	131	1609	27			20540	26.00
41	2200	39	40	263	83	1524	27			20450	26.40
42	1823	0	0	269	53	1557	27			20410	26.50

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 117  
TGW 24300 TCG 13.2 FWD FLIGHT DATE 08/04/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	EAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
1	1000	0	0	265	-19	1758	30			25000	13.20
2	0231	0	0	264	-47	1717	30			24973	13.20
17	1400	0	0	264	-63	1707	30			24557	14.50
18	0231	13	13	265	-20	1785	30			24514	14.60
19	3404	11	11	264	-6	1785	30			24471	14.70
20	3401	8	8	264	-13	1777	30			24428	14.80
21	1726	0	0	264	-33	1743	30			24386	15.10
23	1115	0	0	264	-8	1826	31			24300	15.30
24	1116	0	0	264	-30	1803	31			24213	15.50
25	1115	0	0	264	-19	1821	31			24125	15.70
26	1100	0	0	264	-21	1811	31			24308	16.00
27	1116	0	0	264	-21	1837	31			23950	16.30
28	1516	35	35	264	-19	1804	30			23920	16.40
29	1520	35	35	267	9	1759	30			23890	16.50
30	1515	35	35	264	-6	1802	30			23860	16.60
32	1600	30	30	264	-35	1776	30			23800	16.80
33	1620	30	30	265	-48	1725	30			23700	17.00
34	2200	50	52	265	70	1764	29			23682	17.10
35	2200	27	28	263	85	1757	29			23663	17.20
36	2200	48	49	267	-6	1733	30			23645	17.20
37	1823	0	0	271	-26	1761	30			23626	17.30

EVENTS 3 TO 16 & 38 TO 50 ARE MECHANICAL INSTABILITY TESTING.

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 119  
TGW 24300 TOCG 13.2 FWD FLIGHT DATE 08/05/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	SAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
2	2313	59	60	264	71	1996	31			24800	13.60
3	0148	78	82	264	1841	3518	25			24775	13.90
5	0149	98	104	264	1952	3738	26			24735	14.00
6	0150	107	114	264	2204	3953	25			24720	14.00
7	0150	117	124	264	2296	4057	25			24700	14.10
8	0154	125	132	264	1999	3825	26			24680	14.20
9	0148	67	71	264	2032	3725	25			24660	14.20
10	2313	55	58	264	2079	3722	25			24650	14.20
11	2313	46	49	264	2189	3813	24			24640	14.30
12	2313	39	41	264	2510	4090	23			24625	14.30
13	2313	28	30	264	2640	4192	23			24600	14.40
15	0500	93	98	265	2142	3860	25			24400	15.00
16	0500	92	98	264	1900	3626	26			24400	15.00
17	0500	98	103	267	1667	3428	27			24400	15.00
18	0520	93	98	264	1447	3248	27			24400	15.00
19	2615	28	29	264	1975	3621	25			24350	15.10
20	2616	51	54	264	2095	3732	25			24325	15.20
21	2615	34	36	264	2127	3789	25			24300	15.30
22	2616	48	51	263	2030	3671	25			24300	15.30
23	2616	70	74	264	1810	3533	26			24275	15.40
24	2615	67	70	265	1699	3439	26			24275	15.40
25	2615	66	69	264	1675	3386	26			24225	15.50
26	2616	70	74	263	1651	3365	26			24225	15.50
27	2801	59	62	264	1680	3419	26			24200	15.60
28	2801	74	77	264	1613	3327	26			24200	15.60
29	2810	68	72	271	1606	3310	26			24150	15.70
30	2810	68	71	265	1604	3326	26			24150	15.70
31	2615	105	111	265	1951	3740	26			24100	15.80
32	2616	109	115	264	2076	3867	26			24100	15.80
33	2616	106	112	264	2144	3949	26			24075	15.90
34	2615	103	109	265	2031	3820	26			24050	16.00
35	5215	101	106	264	1951	3766	26			24025	16.10
36	5216	109	115	264	2016	3828	26			24025	16.10
37	2801	107	113	267	2144	3924	26			23975	16.20
38	2810	106	112	268	2143	3913	26			23950	16.30
39	3404	104	110	263	2143	3896	26			23925	16.40
40	3401	101	107	264	2122	3871	26			23900	16.50
41	3407	103	109	264	2093	3835	26			23900	16.50
42	3404	119	127	264	2045	3863	26			23850	16.60
43	3401	120	126	264	2035	3864	26			23850	16.60
44	3407	119	127	265	2031	3855	26			23850	16.60
45	3401	119	126	264	2062	3893	26			23850	16.60
46	0600	101	108	286	2462	4172	25			23800	16.70
47	2637	108	115	274	2126	3867	25			23800	16.70
48	2637	102	107	267	1526	3326	27			23800	16.70
49	2837	101	107	267	2128	3869	25			23750	16.90
50	2837	111	117	271	1749	3538	27			23750	16.90

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VOLUME 1

FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 119  
TGW 24300 TOCG 13.2 FWD FLIGHT DATE 08/05/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
51	0423	106	111	281	1186	3024	28			23750	16.90
52	2200	58	62	264	84	1916	30			23700	17.00

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 121  
T8GW 24300 T8CG 13.4 FWD FLIGHT DATE 08/08/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
2	0231	0	0	265	156	1974	30			24900	13.50
3	2313	0	0	264	188	1941	29			24880	13.50
4	0300	82	86	264	1606	3163	25			24870	13.60
5	0300	76	81	264	2514	3968	22			24800	13.80
6	0300	72	77	264	3451	4843	20			24780	13.80
7	0300	70	77	264	4704	6294	19			24760	13.90
8	0300	63	70	263	5670	7224	17			24730	14.00
9	0300	64	72	264	6664	8223	15			24710	14.10
10	0100	69	79	264	7409	9047	14			24700	14.10
11	0500	69	79	264	7233	8935	15			24680	14.10
12	0150	84	96	265	7273	9108	16			24650	14.20
13	0154	97	111	264	7468	9390	17			24600	14.40
14	0154	97	112	264	7452	9459	17			24550	14.50
15	0149	70	81	264	7568	9556	17			24500	14.70
16	0149	59	69	264	7610	9563	17			24480	14.70
17	0148	54	62	264	7551	9482	16			24460	14.80
18	2313	39	45	264	7712	9661	16			24450	14.80
19	2616	84	96	263	7335	9333	18			24260	15.40
20	2615	82	95	264	7470	9489	17			24240	15.50
21	3404	85	99	264	7565	9544	17			24200	15.60
22	3401	85	98	264	7567	9538	17			24200	15.60
23	3407	84	97	265	7567	9546	17			24200	15.60
24	2801	89	103	264	7512	9488	17			24170	15.70
25	2810	84	97	264	7469	9418	17			24150	15.70
26	2810	83	96	263	7490	9452	17			24150	15.70
28	5215	81	93	264	7480	9448	17			24100	15.80
29	5216	83	96	264	7490	9443	17			24100	15.80
30	3404	90	104	264	7512	9373	16			24050	16.00
31	3401	95	110	264	7512	9417	16			24050	16.00
32	3407	93	107	263	7508	9421	16			24050	16.00
33	2615	57	65	264	7270	9015	15			24025	16.10
34	2616	58	67	264	7350	9122	15			24025	16.10
35	2801	52	60	264	7492	9303	16			24000	16.20
36	2810	57	65	264	7567	9431	16			23980	16.20
37	2810	55	64	267	7630	9525	16			23980	16.20
38	0500	74	85	264	7272	9080	16			23950	16.30
39	0500	76	87	265	6997	8754	16			23950	16.30
40	0500	71	80	264	6549	8100	15			23950	16.30
41	0520	69	78	258	6357	7875	15			23950	16.30
42	2637	74	86	268	8153	10136	16			23900	16.40
43	2637	74	85	277	7154	8963	16			23900	16.40
44	2837	88	99	284	6077	7649	16			23900	16.40
45	0600	80	89	272	5544	7042	17			23900	16.40
46	2837	67	74	261	5334	6812	17			23900	16.40
47	2637	83	96	278	7794	9751	16			23825	16.70
48	2637	81	91	276	6782	8393	15			23825	16.70
49	2837	86	96	280	5839	7376	16			23825	16.70

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VOLUME 1

FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 121  
T8GW 24300 T8CG 13.4 FWD FLIGHT DATE 08/08/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	Hd (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
50	2837	80	89	267	5350	6913	18			23825	16.70
51	2637	73	78	269	2910	4299	21			23750	16.90
52	2637	69	72	269	2211	3642	23			23750	16.90
53	2837	79	83	268	1547	3011	24			23750	16.90
54	2837	78	81	274	1194	2722	25			23750	16.90
56	0100	83	87	265	2191	3680	23			23625	17.30
57	0148	93	98	264	2125	3653	24			23610	17.30
59	0150	117	124	264	2176	3806	24			23560	17.40
60	0154	124	132	264	2160	3812	25			23525	17.50
61	0154	134	142	264	2055	3712	25			23500	17.60
62	0154	135	142	264	2089	3780	25			23480	17.70
63	0423	73	78	272	2979	4410	21			23450	17.80
64	2200	77	79	265	286	2062	29			23350	18.10

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VOLUME 1

FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 122  
T0GW 20800 T0CG 9.7 AFT FLIGHT DATE 08/09/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
2	1515	10		264	100	1779	29			21150	-8.90
3	1905	15		264	99	1804	29			21150	-8.90
4	1515	20		264	149	1892	29			21150	-8.90
5	1905	25		264	130	1929	30			21150	-8.90
6	1515	30		264	123	1825	29			21150	-8.90
7	1905	33		264	129	1815	29			21150	-8.90
8	1515	35		264	129	1797	29			21150	-8.90
9	1520	0	0	264	136	1771	28			21100	-8.80
10	1516	10		264	113	1752	29			21050	-8.70
11	1906	15	17	264	129	1788	29			21050	-8.70
12	1516	20		264	129	1814	29			21050	-8.70
13	1906	25		264	129	1797	29			21050	-8.70
14	1516	30	14	264	144	1797	29			21025	-8.70
15	1906	33	14	264	130	1798	29			21025	-8.70
16	1516	35	20	264	130	1807	29			21025	-8.70
17	1520	18	19	264	128	1796	29			21000	-8.60
18	1600	10		264	93	1753	29			20950	-8.50
19	1921	15	8	264	114	1813	29			20950	-8.50
20	1600	20	14	264	99	1725	28			20950	-8.50
21	1921	25		264	86	1726	29			20950	-8.50
22	1600	30	13	264	143	1788	29			20925	-8.40
23	1620	29	30	264	161	1810	29			20900	-8.30
24	1923	13	13	264	101	1745	29			20900	-8.30
25	2200	70	72	264	445	1999	27			20850	-8.20
26	2200	44	46	264	327	1863	27			20825	-8.20
27	2200	72	74	264	218	1801	28			20800	-8.10
28	1813	89	91	264	161	1818	29			20725	-7.90
29	1823	0	0	264	99	1708	28			20700	-7.90
30	1400	15	16	264	82	1704	28			20650	-7.80
31	0231	0	0	264	101	1745	29			20625	-7.70
32	1715	0	0	264	85	1725	29			20600	-7.60
33	1716	0	0	264	87	1727	29			20575	-7.60
34	3404	9	10	264	115	1788	29			20550	-7.50
35	3404	0	0	264	86	1761	29			20550	-7.50
36	3401	0	0	264	101	1762	29			20550	-7.50
37	3401	0	0	264	99	1778	29			20550	-7.50
38	1726	0	0	264	99	1743	29			20525	-7.50
39	1726	0	0	264	98	1751	29			20525	-7.50
40	1122	0	0	264	100	1780	29			20500	-7.40
41	1122	0	0	264	101	1763	29			20500	-7.40
42	1116	0	0	264	100	1735	29			20500	-7.40
43	1123	0	0	264	130	1824	29			20475	-7.30
44	1116	0	0	264	116	1807	29			20475	-7.30
45	1115	0	0	264	116	1807	29			20475	-7.30

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 124  
T6GW 20800 T6CG 9.7 AFT FLIGHT DATE 08/11/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
2	2313	0	0	264	25	1461	27			21430	-9.60
3	0300	72	76	264	2493	3817	21			21390	-9.50
4	0300	62	66	267	3360	4753	20			21350	-9.40
5	0300	65	71	264	4377	5767	18			21340	-9.40
6	0300	67	74	264	5235	6631	16			21330	-9.40
7	0300	59	66	264	6303	7698	14			21310	-9.30
8	0300	67	76	264	7244	8646	12			21300	-9.30
9	0300	64	75	264	8284	9847	12			21300	-9.30
10	0300	55	65	264	9285	10868	10			21270	-9.20
11	0300	55	76	264	10209	11784	8			21250	-9.20
12	0300	52	63	264	11180	12734	6			21230	-9.10
13	0300	54	67	264	12111	13634	4			21220	-9.10
14	0300	51	63	264	12616	14083	2			21200	-9.00
15	0149	51	64	264	12615	14083	2			21120	-9.00
16	0149	58	73	264	12565	14040	2			21150	-8.90
17	0150	67	84	264	12613	14115	3			21140	-8.90
18	0154	74	92	264	12553	14043	3			21100	-8.80
19	2616	59	73	264	12367	13851	3			21080	-8.80
20	2615	56	69	264	12285	13750	3			21060	-8.70
21	0148	39	48	264	12481	13902	2			21050	-8.70
22	2313	26	32	264	12747	14113	1			21000	-8.60
23	2616	48	60	264	12721	14142	2			20970	-8.50
24	2615	48	59	264	12790	14191	1			20950	-8.40
25	3404	57	71	264	12634	14044	2			20900	-8.30
26	3401	55	68	264	12657	14073	2			20900	-8.30
27	3407	56	70	264	12678	14099	2			20900	-8.30
28	0030	55	68	264	12676	14096	2			20875	-8.30
29	0030	57	71	264	12666	14102	2			20875	-8.30
30	2801	54	68	264	12676	14096	2			20870	-8.30
31	2810	61	76	264	12568	14017	2			20860	-8.30
32	2810	59	73	264	12564	14012	2			20860	-8.30
33	0500	50	62	264	12615	14004	2			20850	-8.20
34	0500	51	63	264	12435	13828	2			20850	-8.20
35	0500	50	62	264	12161	13542	2			20850	-8.20
36	0520	45	55	264	11962	13339	3			20850	-8.20
37	0600	55	68	298	12333	13703	2			20800	-8.10
38	2637	56	69	298	12089	13467	3			20800	-8.10
39	2637	60	72	298	11222	12636	5			20800	-8.10
40	0604	67	79	298	10046	11533	8			20800	-8.10
41	0601	64	76	298	9823	11313	8			20800	-8.10
42	0607	65	77	298	9682	11186	8			20800	-8.10
43	0148	67	74	264	4989	6375	17			20800	-8.10
44	0149	98	108	264	4956	6449	18			20750	-8.10
45	0150	108	119	264	4969	6500	18			20730	-8.00
46	0150	113	124	264	4975	6524	18			20700	-7.90
47	0150	119	132	264	4911	6491	19			20670	-7.80
48	0150	126	138	264	4936	6547	19			20650	-7.80

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VOLUME 1

FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 124  
T0GW 20800 T0CG 9.7 AFT FLIGHT DATE 08/11/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	EAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
49	0154	129	142	264	4837	6453	19			20620	-7.70
50	0154	135	148	264	4645	6228	19			20600	-7.60
51	0154	137	150	264	4336	5955	20			20570	-7.60
52	2313	45	49	264	5113	6473	16			20570	-7.60
53	2313	28	31	264	5041	6359	16			20560	-7.50
54	0232	24	27	264	5057	6458	17			20550	-7.50
55	3404	23	26	264	5162	6612	17			20540	-7.50
56	3401	16	18	264	5217	6662	17			20540	-7.50
57	3407	25	27	264	5250	6703	17			20540	-7.50
58	0100	7	7	248	5288	6669	16			20520	-7.40
59	0100	50	55	248	5269	6654	16			20470	-7.30
60	0100	74	82	248	5145	6574	17			20450	-7.30
61	0100	94	104	248	5126	6603	17			20400	-7.20
62	0100	93	102	248	5040	6498	17			20370	-7.10
63	0100	124	137	248	4905	6535	19			20365	-7.10
64	0114	70	77	264	4921	6335	18			20350	-7.10
65	0114	88	97	264	4887	6346	18			20340	-7.00
66	0114	97	107	264	4781	6261	18			20330	-7.00
67	0114	109	120	264	4799	6319	18			20320	-7.00
68	0114	114	125	264	4817	6366	18			20310	-7.00
69	0114	117	128	264	4902	6471	18			20290	-6.90
70	0114	124	136	264	4918	6508	19			20260	-6.80
71	0600	70	79	298	5997	7404	15			20200	-6.70
72	2637	62	69	298	5769	7169	15			20200	-6.70
73	2637	79	87	298	5023	6434	17			20200	-6.70
74	0604	70	75	298	3948	5331	19			20200	-6.70
75	0601	63	68	298	3792	5132	19			20200	-6.70
76	0607	60	64	298	3592	4913	19			20200	-6.70
77	2837	65	70	298	3171	4459	19			20200	-6.70
78	2837	70	74	298	2688	3967	20			20200	-6.70
79	0423	76	80	298	2143	3341	21			20200	-6.70
80	2200	68	70	264	113	1613	27			20060	-6.40

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 126  
T8GW 20800 T8CG 9.7 AFT FLIGHT DATE 08/11/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP	HD (FT)	SAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
2	2313	35	37	264	69	1376	30			21450	-9.60
4	3404	9	10	264	2112	3554	23			21400	-9.50
5	3404	13	14	264	2098	3537	23			21400	-9.50
6	3401	14	15	264	2095	3542	23			21400	-9.50
7	3407	11	11	265	2112	3537	23			21400	-9.50
8	2313	27	29	264	2254	3675	22			21350	-9.40
9	0148	65	68	264	2366	3705	21			21300	-9.30
10	0148	78	83	263	2365	3722	22			21250	-9.20
11	0149	106	112	264	2399	3852	22			21150	-8.90
12	0149	120	127	264	2255	3835	24			21050	-8.70
13	0150	136	144	264	2193	3794	24			21000	-8.60
14	0150	138	146	264	1920	3548	25			20960	-8.50
15	0150	141	149	264	1966	3604	25			20920	-8.40
16	0150	142	149	264	1447	3137	26			20875	-8.30
17	2616	60	63	263	2284	3667	22			20875	-8.30
18	2615	50	53	264	2309	3644	22			20850	-8.30
19	2616	56	59	263	2543	3869	21			20850	-8.30
20	2615	62	66	264	2625	3979	21			20825	-8.20
21	2616	44	47	263	2675	4012	21			20825	-8.20
22	2801	82	87	264	2224	3638	22			20800	-8.20
23	2810	80	85	269	2320	3728	22			20800	-8.20
24	2810	80	85	266	2397	3805	22			20800	-8.20
25	2615	78	83	264	2209	3628	22			20775	-8.10
26	2616	86	90	264	2209	3637	23			20775	-8.10
27	2615	76	81	264	2226	3631	22			20775	-8.10
28	2616	76	80	264	2173	3567	22			20775	-8.10
29	2615	78	83	266	2240	3634	22			20750	-8.00
30	2616	76	80	264	2272	3661	22			20750	-8.00
31	3404	121	128	264	2243	3793	24			20700	-7.90
32	3404	122	129	264	2223	3769	24			20700	-7.90
33	3401	122	129	265	2254	3825	24			20700	-7.90
34	3407	121	128	265	2286	3846	24			20700	-7.90
35	2801	120	127	270	2128	3662	24			20575	-7.60
36	1813	72	74	264	164	1876	29			20450	-7.30

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VOLUME 1

FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 127  
TSGW 20800 TOCG 9.7 AFT FLIGHT DATE 08/15/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	EAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
2	0148	72	79	265	5091	6210	14			21306	-9.30
3	0114	88	96	264	5127	6308	15			21289	-9.30
4	0114	93	102	265	5219	6403	14			21273	-9.30
5	0149	103	113	264	4986	6233	15			21246	-9.20
6	0150	110	121	265	5019	6247	15			21238	-9.10
7	0500	98	107	265	4669	5800	15			21222	-9.10
8	0500	102	111	263	4418	5574	16			21219	-9.10
9	0500	99	107	265	4111	5258	16			21219	-9.10
10	0125	127	134	264	2827	4016	19			21160	-9.00
11	2801	121	127	268	2348	3554	20			21130	-8.90
12	2200	54	55	264	9	1268	25			20961	-8.50

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 128  
T0GW 20800 T0CG 9.7 AFT FLIGHT DATE 08/18/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	EAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
2	0148	85	88	264	1318	2133	19			21130	-8.90
4	0149	114	113	264	1380	2273	19			21063	-8.70
5	0150	127	132	264	1428	2376	20			21031	-8.70
6	3334	129	134	264	1539	2494	20			21004	-8.60
7	0150	136	142	264	1603	2581	20			20960	-8.50
8	0150	139	145	264	1664	2648	20			20925	-8.40
9	3334	138	143	264	1602	2581	20			20906	-8.30
10	0154	147	152	264	1197	2263	21			20874	-8.30
11	0113	138	143	264	1318	2332	21			20815	-8.20
12	3334	137	142	265	1269	2271	21			20799	-8.10
13	0150	129	134	264	1738	2640	19			20388	-7.20
14	0150	139	143	264	1116	2128	21			20288	-6.90

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 132  
T2GW 20800 T2CG 9.7 AFT FLIGHT DATE 08/24/77

EVENT NO	MAN CENE	IAS (KT)	TAS (KT)	RPM	HP	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
3	0100	6	6	264	235	1515	25	-2.80	-2.80	21464	-9.70
4	0200	12	12	264	253	1537	25	-2.80	-1.70	21453	-9.70
5	0200	0	0	264	247	1538	25	-2.80	-1.00	21445	-9.60
6	0200	4	4	264	269	1547	25	-2.80	.40	21434	-9.60
7	0100	57	59	264	1246	2433	22	-2.70	-2.70	21401	-9.60
8	0100	51	53	264	1216	2387	22	-2.70	-1.70	21380	-9.50
9	0100	57	59	264	1151	2361	23	-2.70	.90	21338	-9.40
10	0100	56	58	264	1149	2359	23	-2.70	.40	21338	-9.40
11	0100	79	81	264	1105	2358	23	-2.70	1.00	21319	-9.40
12	0100	77	80	264	1122	2370	23	-2.60		21303	-9.30
13	0100	75	77	264	1092	2342	23	-2.60	.90	21297	-9.30
14	0100	80	83	264	1112	2384	23	-2.60	-1.80	21286	-9.30
15	0100	78	81	264	1061	2340	23	-2.60	-2.80	21278	-9.30
16	0100	98	101	264	1134	2430	23	-1.50	.90	21207	-9.10

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 133  
TGW 20800 TSCG 9.7 AFT FLIGHT DATE 08/25/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	SAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
2	0200	19	19	264	-67	11	15	-2.80	-2.40	21435	-9.60
3	0200	20	20	264	-38	74	16	-2.80	-1.80	21391	-9.50
4	0200	0	0	264	-79	5	15	-2.80	-0.90	21364	-9.40
5	0200	0	0	264	-80	4	15	-2.80	-0.20	21342	-9.40
6	0100	58	59	264	1729	1763	11	-2.70	-2.30	21238	-9.20
7	0100	55	57	264	1747	1980	13	-2.70	-1.80	21211	-9.10
8	0100	54	56	264	1746	1982	13	-2.70	-0.90	21200	-9.10
9	0100	55	57	264	1761	1998	13	-2.70	-0.30	21189	-9.00
10	0100	98	101	264	1873	2191	14	-1.70	-0.80	21143	-9.00
11	0100	96	99	264	1916	2216	13	-1.80	-0.10	21121	-8.90
12	0100	95	98	264	1934	2229	13	-1.80	1.00	21102	-8.90
13	0100	99	102	264	1855	2160	13	-1.60	1.80	21069	-8.70
14	0100	125	129	264	1886	2280	14	1.20	1.90	21014	-8.50
15	3334	126	130	264	1824	2231	14	1.20	1.80	20971	-8.40
16	0100	127	131	264	1931	2345	14	1.20	2.40	20927	-8.30
17	3334	123	128	264	2014	2420	14	1.00	2.50	20905	-8.20
18	0100	125	129	264	1998	2410	14	1.20	3.40	20851	-8.20
19	3334	125	129	264	1919	2348	14	1.10	3.30	20812	-8.00
20	0153	135	140	264	1899	2370	15	1.90	1.80	20747	-8.00
21	3301	137	142	264	1870	2336	15	1.90	1.70	20725	-8.00
22	3304	135	140	264	1968	2418	14	1.90	1.80	20709	-7.90
23	0153	136	141	264	1996	2434	14	1.90	2.30	20668	-7.80
24	3301	136	141	264	2029	2482	14	1.90	2.30	20630	-7.70
25	0153	137	141	264	1806	2225	15	1.90	3.40	20570	-7.60
26	3334	136	141	264	1854	2306	15	1.90	3.40	20567	-7.50
27	0153	137	142	264	1951	2415	15	1.90	2.30	20504	-7.40
28	0153	139	144	264	2015	2476	14	1.90	1.00	20466	-7.40
29	0100	52	57	264	5529	6225	10	-2.70	-2.40	20379	-7.20
30	0100	53	59	264	5521	6225	10	-2.70	-2.40	20373	-7.20
31	0100	53	58	264	5530	6290	10	-2.70	-1.80	20340	-7.10
32	0100	54	59	264	5495	6255	10	-2.70	-0.90	20324	-7.00
33	0100	51	56	264	5528	6278	10	-2.70	-0.30	20305	-7.00
34	0100	72	79	264	5300	6025	10	-2.70	1.20	20264	-6.90
35	0100	70	77	264	5250	5981	10	-2.70	-0.30	20242	-6.80
36	0100	74	81	264	5511	6284	10	-2.70	-0.90	20201	-6.70
37	0100	71	78	264	5510	6265	10	-2.70	-1.90	20182	-6.70
38	0100	73	80	264	5444	6183	10	-2.70	-2.70	20160	-6.60
39	0100	91	100	264	5443	6237	11	-0.90	-1.00	20128	-6.60
40	0100	89	98	264	5403	6170	10	-0.90	-0.10	20100	-6.50
41	0100	90	99	264	5445	6257	11	-0.90	1.00	20084	-6.50
42	0100	89	97	264	5509	6300	10	-0.90	2.30	20065	-6.40
43	0100	90	99	264	5599	6357	10	-0.90	-1.00	20040	-6.40
44	0100	119	130	264	5475	6358	11	1.70	1.60	19999	-6.30
45	3334	119	130	264	5423	6294	11	1.70	1.60	19983	-6.20
46	3334	119	131	263	5421	6309	11	1.70	1.60	19972	-6.20
47	0100	117	129	264	5556	6439	11	1.70	2.50	19945	-6.20
48	3334	117	129	264	5636	6501	11	1.70	2.50	19934	-6.10

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 133  
T83W 20800 T83G 9.7 AFT FLIGHT DATE 08/25/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
49	0100	118	130	264	5673	6520	11	1.70	3.40	19896	+6.00
50	3334	120	133	265	5614	6456	11	1.70	3.40	19885	+6.00

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 134  
TGW 20800 TCG 9.7 AFT FLIGHT DATE 08/25/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
2	0100	51	60	264	9098	10449	8	-2.70	.10	21151	-9.00
3	0100	50	59	264	9118	10491	8	-2.70	-.80	21140	-8.90
4	0100	51	59	264	9172	10558	8	-2.70	-2.10	21123	-8.90
5	0100	67	78	264	8666	9824	8	-2.70	1.30	21096	-8.80
6	0100	68	78	264	8604	9746	7	-2.70	.20	21077	-8.80
7	0100	68	78	264	8668	9754	7	-2.70	-.90	21063	-8.70
8	0100	70	82	264	8666	9814	7	-2.70	-1.90	21047	-8.70
9	0100	84	98	264	8688	10001	9	-.80	2.40	21012	-8.60
10	0100	85	100	264	8781	10194	9	-.80	1.10	20973	-8.50
11	0100	85	99	264	8879	10314	9	-.80	.10	20952	-8.50
12	0100	83	97	264	8877	10347	10	-.80	-1.10	20938	-8.40
13	0153	101	117	264	8589	10021	10	2.10	2.20	20870	-8.30
14	0153	103	120	264	8579	9964	10	2.10	2.70	20842	-8.20
15	0153	102	119	264	8668	10047	9	2.10	3.30	20818	-8.20
16	0100	46	57	264	12491	14035	3	-2.70	.20	20687	-7.90
17	0100	45	55	264	12543	14087	3	-2.70	-.70	20668	-7.80
18	0100	47	58	264	12562	14101	3	-2.70	-1.90	20649	-7.80
19	0100	63	78	264	12603	14177	3	-2.70	1.30	20627	-7.70
20	0100	62	78	264	12648	14223	3	-2.70	.30	20605	-7.70
21	0100	62	78	264	12667	14239	3	-2.70	-.80	20594	-7.70
22	0100	61	76	264	12693	14279	3	-2.70	-1.90	20578	-7.60
23	0100	77	96	264	12429	14053	4	-.70	2.20	20540	-7.50
24	0100	75	93	264	12453	14073	4	-.70	1.20	20523	-7.50
25	0100	118	129	264	5461	6151	10	1.50	1.60	20400	-7.20
26	3334	116	128	264	5527	6223	10	1.50	1.60	20368	-7.10
27	0100	118	129	264	5509	6192	9	1.50	2.40	20335	-7.00
28	3334	116	127	264	5529	6207	9	1.50	2.40	20319	-7.00
29	0100	119	131	264	5495	6192	10	1.50	3.30	20302	-7.00
30	3334	120	132	264	5423	6131	10	1.40	3.40	20286	-6.90
31	0153	132	145	264	5372	6168	11	1.50	1.60	20226	-6.80
32	3334	131	143	264	5299	6105	11	1.50	1.60	20198	-6.70
33	0153	129	141	264	5404	6189	11	1.50	2.30	20177	-6.70
34	3334	130	143	264	5386	6176	11	1.40	2.30	20089	-6.50
35	0153	129	141	264	5477	6243	10	1.40	3.40	20051	-6.40
36	3334	129	142	264	5527	6305	10	1.40	3.30	20032	-6.30
37	0100	116	128	264	5764	6441	9	.10	.90	19928	-6.10
38	0100	118	131	264	6084	6826	9	1.30	1.30	19838	-5.90

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 135  
T8GW 20800 T8CG 9.7 AFT FLIGHT DATE 08/26/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
2	0100	61	63	264	1378	2099	18	-2.70	-2.70	21353	-9.40
3	0100	79	82	265	1333	2089	18	-2.70	-2.50	21323	-9.40
4	0100	99	102	265	1271	2095	19	-1.40	-0.90	21282	-9.30
5	0100	120	124	264	1410	2283	19	.50	1.10	21235	-9.20
6	0100	127	132	264	1504	2399	19	1.40	2.40	21200	-9.10
7	0153	133	138	264	1519	2435	19	1.40	2.40	21156	-9.00
8	0153	136	141	264	1582	2513	19	1.40	3.40	21096	-8.90
9	0100	130	134	264	1285	2184	20	1.40	3.40	20998	-8.60
10	0100	118	122	264	1332	2206	19	.50	2.70	20938	-8.50
12	0100	99	103	264	1271	2076	19	-1.30	1.50	20900	-8.40
13	0100	82	84	264	1300	2068	19	-2.60	.20	20862	-8.30
14	0100	61	63	264	1317	2070	18	-2.70	-1.60	20831	-8.20
15	0100	62	68	264	5423	6399	12	-2.60	-2.70	20719	-8.20
16	0100	81	89	264	5474	6460	12	-2.60	-2.40	20711	-8.20
17	0100	99	109	264	5422	6433	12	-1.30	-0.90	20697	-8.20
18	0100	118	131	264	5561	6674	13	.20	.90	20654	-7.80
19	0153	130	143	264	5348	6476	14	1.40	2.40	20577	-7.70
20	0153	129	142	264	5317	6412	13	1.40	3.40	20542	-7.60
21	0100	118	131	264	5491	6616	13	.60	3.00	20471	-7.40
22	0100	97	107	264	5315	6347	13	-1.30	1.50	20424	-7.20
23	0100	83	91	264	5284	6281	13	-2.50		20400	-7.20
25	0100	56	61	264	5334	6271	12	-2.70	-1.60	20354	-7.10
26	2615	103	107	264	2122	2904	17	-1.10	1.50	20263	-6.90
27	2615	118	123	264	2263	3060	17	.30	2.90	20173	-6.70
28	2615	136	142	265	1992	2926	19	1.40	3.40	20062	-6.40

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 136  
TGW 20800 TUG 9.7 AFT FLIGHT DATE 08/29/77

EVENT NR	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
1	0148	78	81	264	1263	2569	23	-2.50	-2.30	21233	-9.10
2	0149	97	102	264	1357	2738	24	-0.90	-1.00	21154	-9.00
3	0149	106	110	264	1293	2694	24	-0.20	-0.20	21132	-8.90
4	0149	122	127	264	1340	2769	24	.60	.50	21110	-8.90
5	0150	129	134	265	1373	2810	24	1.40	1.30	21080	-8.80
6	3334	123	128	263	1481	2915	24	1.40	1.30	21025	-8.60
7	0150	135	140	264	1216	2618	24	1.40	1.30	20520	-7.50
8	3334	131	137	266	1137	2601	25	1.40	1.30	20496	-7.50
9	0150	131	136	264	1307	2676	24	1.40	1.30	20422	-7.30
10	0113	128	133	265	1323	2696	24	1.40	2.40	20417	-7.30
11	0113	54	56	264	1418	2590	22	-2.40	.20	20354	-7.10
12	0113	59	62	265	1542	2751	22	-2.40	-1.00	20313	-7.10
13	0113	54	56	264	1307	2455	22	-2.40	-1.90	20278	-6.90
14	2313	55	57	264	1446	2723	23	-2.40	-2.40	20248	-6.80
15	0113	92	95	264	1105	2376	23	-1.20	-1.00	20201	-6.70
16	0113	96	99	264	1170	2367	23	-1.20	-1.10	20174	-6.60
17	0113	92	96	264	1417	2740	23	-1.20	.80	20149	-6.60
18	0113	93	97	264	1541	2812	22	-1.20	1.80	20114	-6.50
19	0113	124	129	264	1277	2610	24	.90	1.70	20073	-6.40
20	0113	123	128	264	1325	2636	23	.90	2.70	20043	-6.40
21	3334	123	128	264	1396	2741	23	.90	2.70	20021	-6.30
22	0113	126	131	264	1403	2779	24	.90	3.40	19989	-6.20
23	3334	123	129	264	1373	2757	24	.90	3.40	19975	-6.20
24	0113	136	141	264	1447	2866	24	1.30	3.40	19939	-6.10
25	3334	133	138	264	1472	2861	24	1.30	3.40	19920	-6.00
26	0113	130	136	264	1561	2943	23	1.30	2.70	19898	-6.00
27	3334	139	146	264	1651	3133	24	1.30	2.70	19855	-5.90
28	0150	134	141	264	1653	3047	23	1.30	1.80	19817	-5.80
29	0113	119	123	264	1248	2568	23	1.30	1.80	19784	-5.70

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 137  
T8GW 20800 T8CG 9.7 AFT FLIGHT DATE 08/29/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
2	2313	16	18	264	4781	6059	16	-2.40	-2.30	21380	-9.50
3	2313	55	60	264	4854	6193	17	-2.40	-2.30	21356	-9.40
4	0148	73	80	264	4816	6164	17	-2.40	-2.30	21348	-9.40
5	0149	98	108	264	4815	6225	17	-1.00	-1.00	21323	-9.40
6	0149	106	116	264	4781	6236	18	-0.20	-0.30	21296	-9.30
7	0113	109	119	264	4959	6408	17	.80	.80	21266	-9.20
8	0150	117	129	264	4974	6437	17	.80	.80	21247	-9.20
9	0113	118	130	264	5112	6562	17	1.40	1.40	21231	-9.10
10	0150	124	136	264	4837	6314	18	1.50	1.40	21209	-9.10
11	0113	125	137	264	4748	6188	18	2.70	3.40	21190	-9.10
12	0113	97	107	264	4885	6320	17	1.00	1.30	21147	-8.90
13	0113	107	117	264	4845	6305	18	1.00	1.30	21136	-8.90
14	0150	120	132	264	4870	6424	18	1.00	1.30	21117	-8.80
15	0150	123	135	264	4797	6350	19	1.00	1.30	21073	-8.70
16	0113	125	138	264	4713	6242	18	1.00	1.80	21043	-8.70
17	0148	73	80	264	4817	6174	17	-2.40	-2.30	21008	-8.60
18	0100	74	81	247	4733	6133	17	-2.30	-2.30	20994	-8.60
19	0100	49	54	248	4921	6266	16	-2.30	-2.30	20983	-8.50
20	0100	25	27	248	4935	6216	16	-2.30	-2.30	20962	-8.50
21	0100	94	102	248	4680	6043	17	-1.00	-1.00	20940	-8.40
22	0100	98	108	247	4661	6018	17	-1.00	-1.00	20926	-8.40
23	0114	100	109	264	4843	6242	17	-2.30	-2.40	20902	-8.30
24	0114	88	96	264	4871	6240	17	-2.30	-2.60	20896	-8.30
25	0148	77	85	264	4875	6210	16	-2.20	-2.40	20891	-8.30

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 138  
T8GW 20800 T8CG 9.7 AFT FLIGHT DATE 08/30/77

EVENT NE	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
1	2313	54	56	264	1097	2405	24	-2.40	-2.60	21407	-9.60
2	2313	28	29	264	1107	2461	24	-2.40	-2.60	21396	-9.60
3	0232	17	17	264	1170	2635	25	-2.40	-2.60	21374	-9.50
4	3404	10	11	264	1199	2688	25	-2.40	-2.60	21363	-9.40
5	3401	24	25	264	1228	2715	25	-2.40	-2.60	21358	-9.40
6	1726	22	23	265	1264	2759	25	-2.40	-2.60	21355	-9.40
7	1726	19	20	265	1264	2750	25	-2.50	-2.60	21352	-9.40
8	0148	88	91	265	1092	2567	25	-2.00	-2.00	21330	-9.40
9	0149	119	124	264	1372	3023	26	-2.20	-2.30	21287	-9.30
10	0150	128	134	264	1277	2767	25	.70	.60	21232	-9.10
11	0150	140	146	264	1179	2664	25	.80	.80	21150	-8.90
12	0154	147	153	264	1199	2768	26	.80	.80	21117	-8.90
13	5215	122	127	264	1120	2628	25	.80	.80	21087	-8.80
14	5216	134	139	264	999	2497	26	.80	.80	21079	-8.80
15	2615	128	133	264	1156	2680	25	.80	.80	21065	-8.80
16	2615	128	133	264	1105	2644	26	.80	.70	20888	-8.30
17	2616	131	137	264	1136	2656	25	.80	.70	20866	-8.30
18	2615	122	126	264	1047	2573	26	.40	.50	20787	-8.10
19	2616	124	129	264	1012	2495	25	.40	.50	20765	-8.00
20	2801	123	127	264	888	2353	25	.40	.50	20743	-8.00
21	2810	122	126	266	1047	2583	26	.40	.50	20705	-7.90
22	3404	136	141	264	1294	2846	25	.90	.90	20650	-7.70
23	3401	134	140	264	1293	2821	25	.90	.90	20645	-7.70
24	3407	134	140	265	1279	2822	25	.90	.90	20645	-7.70
25	3404	124	129	264	1277	2775	25	.80	.80	20607	-7.60
26	3401	127	132	264	1215	2769	26	.80	.80	20607	-7.60
27	3407	128	133	264	1220	2768	26	.80	.80	20601	-7.60
28	2801	91	95	267	1149	2654	25	-1.90	-1.80	20563	-7.50
29	2810	85	88	266	1187	2713	25	-1.90	-1.80	20558	-7.50
30	2616	91	94	263	1062	2574	26	-1.90	-1.80	20547	-7.50
31	2615	88	91	265	1105	2618	25	-1.90	-1.80	20541	-7.50
32	2615	88	92	264	1171	2698	25	-1.90	-1.80	20525	-7.50
33	2616	91	95	264	1294	2840	25	-1.90	-1.80	20514	-7.40
34	1923	33	34	263	1607	3134	25	-2.70	-2.70	20465	-7.30
35	1923	130	136	264	1527	3185	26	1.20	1.90	20449	-7.30
36	2837	98	101	261	374	1971	28	-1.40	-0.90	20367	-7.00

CHECKED BY:  
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D210-11168-3  
VOLUME 1

FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 139  
T9GW 20800 T9CG 9.7 AFT FLIGHT DATE 08/30/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
2	2616	74	81	264	4592	6016	18	-2.60	-2.50	20962	-8.50
3	2615	79	86	264	4520	5955	18	-2.70	-2.40	20951	-8.50
4	2616	70	77	265	4557	5947	18	-2.70	-2.40	20935	-8.40
5	2615	83	91	263	4267	5681	18	-2.70	-2.40	20924	-8.40
6	2801	74	80	265	4439	5812	18	-2.70	-2.50	20902	-8.40
7	2801	82	90	265	4438	5828	18	-2.70	-2.40	20902	-8.40
8	2801	72	79	264	4543	5939	18	-2.70	-2.40	20897	-8.30
9	2810	74	81	269	4299	5738	18	-2.70	-2.40	20883	-8.30
10	2810	79	86	271	4321	5762	18	-2.70	-2.50	20881	-8.30
11	2615	39	42	264	4520	5928	18	-2.70	-2.40	20851	-8.20
12	2616	38	41	265	4624	6012	17	-2.70	-2.50	20842	-8.20
13	0150	114	125	264	4780	6317	18	.80	.80	20766	-8.00
14	2615	103	113	264	4728	6271	19	-.60	-.60	20717	-7.90
15	2616	100	109	264	4831	6379	18	-.60	-.60	20700	-7.90
16	2616	100	111	264	4940	6460	18	-.60	-.60	20673	-7.80
17	2801	107	117	264	4482	6059	19	-.60	-.60	20646	-7.80
18	2810	102	111	267	4419	5990	19	-.60	-.60	20635	-7.70
19	2810	103	112	270	4411	5967	19	-.60	-.60	20635	-7.70
20	5215	101	111	264	4607	6141	19	-.60	-.60	20597	-7.70
21	5216	107	117	264	4677	6200	18	-.60	-.60	20586	-7.60
22	3404	101	110	264	4541	6060	19	-.60	-.60	20564	-7.50
23	3404	99	108	264	4558	6081	19	-.60	-.60	20564	-7.50
24	3401	98	108	264	4543	6070	19	-.60	-.60	20559	-7.50
25	3407	98	108	264	4560	6074	19	-.60	-.60	20559	-7.50
26	3407	103	113	264	4471	5974	19	-.60	-.60	20553	-7.50
27	3407	103	113	263	4454	5954	19	-.60	-.50	20553	-7.50
28	0500	97	106	255	4592	6078	18	-1.10	-1.00	20520	-7.50
29	0500	101	110	266	4353	5813	19	-1.10	-1.00	20515	-7.50
30	0500	96	104	263	3943	5400	19	-1.10	-1.00	20515	-7.50
31	0619	104	114	269	4987	6464	17	-.50	-.50	20466	-7.30
32	0600	103	112	284	4072	5531	19	-.50	-.50	20466	-7.30
33	2637	99	107	283	3827	5293	20	-.50	-.50	20463	-7.30
34	2637	101	109	286	3147	4674	22	-.50	-.50	20463	-7.30
35	2837	99	105	282	2434	4030	24	-.50	-.50	20460	-7.30
36	2837	96	101	262	1825	3462	25	-.50	-.50	20458	-7.30
37	0604	96	104	285	3895	5359	20	-.50	-.50	20392	-7.20
38	0601	100	108	272	3560	5081	21	-.50	-.50	20389	-7.20
39	0607	102	109	276	3358	4861	21	-.50	-.50	20389	-7.20
40	0607	102	110	275	3177	4684	21	-.50	-.50	20389	-7.20
41	0423	107	114	268	2704	4264	23	-.50	-.50	20389	-7.20
42	2615	40	41	264	1322	2960	26	-2.50	-2.50	20354	-7.10
43	2616	41	42	264	1418	3061	26	-2.50	-2.50	20349	-7.10
44	2615	44	46	263	1403	3052	26	-2.50	-2.50	20332	-7.00
45	2616	41	43	262	1607	3213	25	-2.50	-2.50	20318	-7.00
46	2200	62	65	264	983	2662	27	-2.60	-2.70	20228	-6.80
47	2200	78	81	264	254	2034	30	-2.70	-2.70	20185	-6.70
48	2200	55	56	266	58	1900	30	-2.70	-2.70	20149	-6.60

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VOLUME 1

FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 139  
T8GW 20800 T8CG 9.7 AFT FLIGHT DATE 08/30/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
49	2200	62	64	269	71	1916	30	-2.70	-2.70	20127	-6.50

CHECKED BY:  
DATE:

0210-11168-3  
VOLUME 1

FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 140  
T9GW 24300 T8CG 4.4 FWD FLIGHT DATE 08/31/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
1	0231	0	0	264	-98	1198	26	-2.80	-2.80	24662	5.30
2	1715	0	0	264	-82	1227	26	-2.80	-2.80	24648	5.30
3	1716	11	12	265	-96	1246	26	-2.80	-2.80	24637	5.30
4	3404	0	0	264	-81	1290	27	-2.80	-2.80	24610	5.40
5	3404	0	0	265	-97	1271	27	-2.80	-2.80	24610	5.40
6	3401	18	19	264	-82	1272	26	-2.80	-2.80	24610	5.40
7	3407	8	8	264	-81	1272	26	-2.80	-2.80	24604	5.40
8	1726	0	0	264	-94	1247	26	-2.80	-2.80	24588	5.40
9	1726	0	0	264	-111	1236	26	-2.80	-2.80	24583	5.40
10	1122	0	0	264	-80	1256	26	2.80	-60	24550	-5.60
11	1116	0	0	264	-106	1233	26	2.80	-60	24544	-5.60
12	1115	0	0	264	-103	1201	26	2.80	-60	24533	-5.60
13	1516	25	26	265	-53	1253	26	2.80	-60	24479	5.70
14	1905	10	10	264	-63	1258	26	2.80	-70	24345	6.10
15	1515	10	10	266	-35	1338	26	2.80	-60	24340	6.10
16	1905	15	15	265	-48	1303	26	.90	-2.70	24337	6.10
17	1515	20	20	264	-49	1222	26	-2.80	-2.70	24332	6.10
18	1905	25	25	264	-49	1232	26	-2.80	-2.70	24329	6.10
19	1515	30	30	266	-62	1207	26	-2.80	-2.70	24323	6.10
20	1905	35	35	264	-64	1204	26	-2.80	-2.70	24323	6.10
21	1515	35	35	266	-47	1233	26	-2.80	-2.70	24321	6.10
22	1520	0	0	266	-47	1199	25	-2.80	-2.70	24318	6.10
23	1906	10	10	265	-49	1276	26	-2.80	-2.70	24239	6.40
24	1516	10	10	265	-64	1258	26	-2.80	-2.70	24236	6.40
25	1906	15	15	264	-79	1248	26	-2.80	-2.70	24233	6.40
26	1516	20	20	266	-34	1312	26	-2.80	-2.70	24233	6.40
27	1906	28	28	265	-33	1313	26	-2.80	-2.70	24228	6.40
28	1516	30	30	265	-41	1277	26	-2.80	-2.70	24225	6.40
29	1906	33	33	265	-48	1277	26	-2.80	-2.70	24225	6.40
30	1516	35	35	264	-62	1251	26	-2.80	-2.70	24222	6.40
31	1520	0	0	266	-63	1250	26	-2.80	-2.70	24222	6.40
32	1921	-5	-5	264	-33	1269	26	-2.80	-2.70	24192	6.50
33	1600	-10	-10	265	-20	1285	26	-2.80	-2.70	24190	6.50
34	1921	-15	-15	264	-19	1268	26	-2.80	-2.70	24187	6.50
35	1600	-20	-20	264	-18	1269	26	-2.80	-2.70	24184	6.50
36	1921	-26	-26	265	-36	1248	26	-2.80	-2.70	24181	6.50
37	1600	-30	-30	264	-18	1314	26	-2.80	-2.70	24179	6.50
38	1520	0	0	264	-49	1284	26	-2.80	-2.70	24179	6.50
39	2200	52	53	265	55	1261	25	-2.80	-2.70	24140	6.60
40	2200	31	32	264	161	1347	24	-2.80	-2.70	24110	6.70
41	2200	70	71	264	-21	1275	26	-2.80	-2.70	24072	6.80
42	2200	65	67	268	-33	1251	26	-2.70	-2.60	24025	6.90
43	1400	0	0	262	-94	1211	26	-2.70	-2.60	24012	6.90
44	1823	0	0	270	-108	1247	26	-2.70	-2.60	23993	7.00
45	1116	3	3	264	-94	1292	27	2.80	-60	23974	7.00
46	1115	0	0	264	-94	1283	27	2.80	-60	23971	7.00

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VOLUME 1

FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 141  
TGW 24300 TCG 4.4 FWD FLIGHT DATE 08/31/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
2	2313	61	63	265	11	1762	30	-2.80	-2.80	24962	4.50
3	2200	66	67	268	10	1700	29	-2.80	-2.80	24959	4.50
4	0300	66	68	265	171	1836	29	-2.70	-2.70	24943	4.50
5	0300	79	82	265	1152	2735	26	-2.60	-2.70	24921	4.60
6	0300	70	74	265	2205	3705	23	-2.70	-2.70	24899	4.60
7	0300	61	65	265	3311	4714	20	-2.70	-2.70	24875	4.70
8	0300	58	63	265	4130	5530	18	-2.70	-2.70	24872	4.70
9	0300	65	72	265	5352	6787	16	2.70	3.50	24828	4.80
10	0300	65	73	265	6264	7690	14	2.70	3.50	24807	4.90
11	0300	74	84	265	7111	8470	12	2.70	3.50	24788	4.90
12	0300	71	81	265	7335	8753	12	2.70	3.50	24782	4.90
13	0149	67	76	264	7339	8740	12	2.70	3.50	24779	5.00
14	0500	74	84	266	7223	8597	12	2.70	3.50	24763	5.00
15	0500	71	81	265	7013	8385	13	2.70	3.50	24763	5.00
16	0500	74	84	269	6837	8187	13	2.70	3.50	24760	5.00
17	0520	73	83	263	6663	8028	13	2.70	3.50	24760	5.00
18	0149	65	74	265	6921	8272	13	2.80	3.50	24744	5.00
19	0149	79	89	265	6921	8352	13	2.70	3.60	24736	5.10
20	0150	88	100	265	6921	8308	13	2.70	3.50	24725	5.10
21	0150	93	106	265	6978	8474	14	2.70	3.60	24712	5.20
22	3334	92	104	264	6997	8497	14	2.70	3.50	24712	5.20
23	0148	56	63	265	6906	8254	13	2.70	3.60	24690	5.20
24	0148	50	57	265	6955	8350	13	2.70	3.50	24679	5.20
25	2313	39	44	265	6886	8220	12	2.70	3.50	24654	5.30
26	2615	73	82	264	6905	8332	13	2.70	3.60	24635	5.30
27	2616	82	93	265	6887	8346	14	2.70	3.50	24619	5.40
28	3404	77	88	265	6905	8341	13	2.70	3.50	24605	5.40
29	3401	77	87	264	6903	8329	13	2.70	3.50	24605	5.40
30	3407	76	87	265	6885	8281	13	2.70	3.60	24602	5.40
31	5215	73	83	264	6920	8341	13	2.70	3.60	24600	5.40
32	5216	78	88	264	6946	8365	13	2.70	3.50	24597	5.40
33	2801	81	91	267	6997	8436	13	2.70	3.60	24589	5.40
34	2810	77	88	265	6923	8316	13	2.70	3.50	24583	5.50
35	2616	54	61	265	6904	8234	12	2.70	3.50	24564	5.50
36	2615	49	55	264	6724	8049	13	2.70	3.50	24548	5.50
37	2801	58	66	266	6860	8145	12	2.70	3.50	24528	5.60
38	2810	52	58	270	6835	8167	13	2.70	3.50	24515	5.60
39	0600	63	71	274	6826	8157	13	2.70	3.50	24501	5.70
40	2637	67	76	281	6575	7894	13	2.70	3.50	24501	5.70
41	2637	81	90	282	5731	7126	15	2.70	3.50	24501	5.70
42	2837	75	82	258	4783	6196	17	2.70	3.50	24501	5.70
43	2837	64	70	276	4130	5601	19	2.70	3.50	24501	5.70
44	0619	85	97	267	7108	8536	13	2.70	3.50	24433	5.90
45	0600	90	101	280	6284	7688	14	2.70	3.50	24433	5.90
46	2637	94	105	279	5994	7430	15	2.70	3.50	24433	5.90
47	2637	82	90	259	4902	6368	18	2.70	3.50	24433	5.90
48	2837	90	98	279	4193	5687	19	2.70	3.50	24430	5.90

CHECKED BY:  
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D210-11168-3  
VOLUME 1

FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 141  
T6GW 24300 T6CG 4.4 FWD FLIGHT DATE 08/31/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
49	2837	78	84	269	3809	5297	20	2.70	3.50	24430	5.90
50	0149	81	89	264	4788	6265	18	-2.50	-2.50	24381	6.00
51	0150	100	110	265	4800	6332	18	-0.90	-0.40	24362	6.00
52	0154	110	120	265	4729	6262	18	-0.10	0.80	24348	6.10
53	0149	110	115	265	1590	3156	25		0.80	24293	6.20
54	0113	122	128	265	1604	3200	25	1.10	2.40	24277	6.30
55	2616	118	124	265	1556	3124	25	1.30	2.40	24271	6.30
56	0113	129	135	264	1556	3185	26	1.40	2.40	24252	6.30
57	2200	25	25	263	-33	722	21	-2.70	-2.80	24184	6.50

CHECKED BY:  
DATE:

0210-11168-3  
VOLUME 1

FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 142  
TGW 24300 TCG 4.4 FWD FLIGHT DATE 09/01/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
2	2313	59	61	265	-63	1576	29	-2.80	-2.80	24973	4.40
3	2313	52	54	265	1710	3073	23	-2.70	-2.70	24927	4.60
4	2313	38	40	265	1738	3160	23	-2.70	-2.70	24918	4.60
5	2313	28	30	265	1807	3183	23	-2.70	-2.70	24910	4.60
6	2313	57	60	265	1856	3243	23	-2.70	-2.70	24880	4.70
7	0148	69	72	265	1790	3198	23	-2.70	-2.70	24867	4.70
8	0148	80	84	265	1793	3219	23	-2.30	-2.70	24853	4.80
9	0149	88	92	265	1762	3172	23	-1.60	-1.70	24839	4.80
10	0149	96	101	264	1842	3332	24	-1.00	-1.10	24823	4.80
11	0149	107	112	265	1951	3456	24	-1.10	-2.20	24806	4.90
12	0150	119	125	265	1981	3564	24	1.30	.40	24784	4.90
13	0150	122	128	265	1738	3327	25	1.30	1.00	24757	5.00
14	3334	123	129	265	1731	3319	25	1.40	1.00	24738	5.00
15	0113	124	131	265	2048	3618	24	2.80	3.50	24683	5.20
16	0100	74	77	250	1588	3057	24	-2.60	-2.60	24618	5.40
17	0100	45	47	249	1603	3031	24	-2.70	-2.70	24593	5.40
18	0100	23	24	249	1629	3035	23	-2.70	-2.70	24574	5.50
19	0100	97	102	249	1634	3139	24	-1.10	-1.00	24541	5.60
20	0100	100	105	249	1527	3087	25	-.80	-.70	24514	5.60
21	0114	75	78	265	1665	3134	24	-2.70	-2.70	24457	5.80
22	0114	83	87	265	1601	3107	24	-2.70	-2.70	24446	5.80
23	0114	90	94	265	1637	3178	25	-2.70	-2.70	24435	5.80
24	0114	95	100	265	1637	3168	25	-2.70	-2.70	24419	5.90
25	0114	99	104	266	1696	3214	24	-2.70	-2.70	24397	5.90
26	0114	103	108	265	1821	3350	24	-2.70	-2.70	24381	6.00
27	2615	104	110	265	1869	3418	24	-.20	-.10	24351	6.10
28	2616	109	114	264	1680	3240	25	.10	-.10	24334	6.10
29	2615	105	109	265	1675	3233	25	-.10	-.10	24307	6.20
30	2616	108	113	264	1601	3160	25	-.10	-.10	24290	6.20
31	3404	109	115	265	1730	3301	25	.10	-.10	24266	6.30
32	3401	110	115	265	1745	3310	25	.10	-.10	24263	6.30
33	3407	109	115	265	1777	3340	25	.10	-.10	24260	6.30
34	5216	109	115	266	1840	3391	24	.10	-.10	24252	6.30
35	5215	104	110	265	1854	3408	24	-.50	-.10	24244	6.30
36	2801	108	114	268	1841	3339	24	.10	-.10	24233	6.40
37	2810	107	112	270	1808	3325	24		-.10	24222	6.40
38	2810	111	116	271	1763	3305	24	.10	-.10	24200	6.40
39	3404	121	126	265	1602	3188	25	1.40	.10	24157	6.60
40	3401	121	126	265	1603	3180	25	1.30	1.00	24149	6.60
41	3407	125	132	264	1579	3186	25	1.40	1.00	24146	6.60
42	2615	70	74	265	1636	3062	24	-2.60	-2.70	24121	6.70
43	2616	79	82	265	1541	2999	24	-2.40	-2.70	24110	6.70
44	2615	71	74	264	1714	3184	24	-2.60	-2.80	24094	6.70
45	2616	74	77	264	1570	3043	24	-2.70	-2.80	24083	6.80
46	2801	77	81	266	1760	3232	24	-2.60	-2.80	24059	6.90
47	2810	75	79	266	1792	3270	24	-2.60	-2.70	24048	6.90
48	2615	47	49	265	1570	3009	24	-2.70	-2.70	24031	6.90

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 142  
T8GW 24300 T8CG 4-4 FWD FLIGHT DATE 09/01/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
49	2616	60	62	265	1695	3152	24	-2.70	-2.80	24020	6.90
50	0500	96	100	265	1745	3275	24	-.80	-1.00	23982	7.00
51	0500	97	101	264	1543	3090	25	-.80	-1.00	23979	7.00
52	0500	97	101	265	1243	2811	26	-1.00	-1.00	23977	7.00
53	0600	74	78	280	2332	3754	22	-2.70	-2.70	23936	7.10
54	2637	74	78	278	2109	3553	23	-2.70	-2.70	23936	7.10
55	2637	62	64	263	1504	2963	24	-2.70	-2.70	23936	7.10
56	2837	79	81	267	614	2060	26	-2.60	-2.70	23933	7.10
57	2837	68	71	284	1619	3086	24	-2.70	-2.70	23889	7.20
58	0423	68	71	269	1432	2892	24	-2.70	-2.70	23889	7.20
59	2837	57	58	276	236	1694	27	-2.70	-2.70	23887	7.20
60	0600	115	122	278	2366	3919	23	.70	.10	23807	7.50
61	2637	109	115	285	2190	3748	24	.70	.10	23807	7.50
62	2637	85	89	262	1763	3270	24	-2.10	.10	23807	7.50
63	2837	112	119	273	2205	3749	24	1.00	.10	23723	7.70
64	2837	110	116	285	1806	3358	24	.20	.10	23723	7.70
65	0423	100	105	268	1602	3153	25	-.30	.10	23720	7.70
66	2837	79	81	275	749	2313	27	-.80	.10	23720	7.70
67	2600	75	78	265	903	2448	26	-2.60	-2.70	23696	7.80
68	2600	76	79	264	881	2430	26	-2.60	-2.70	23693	7.80
69	2600	74	77	264	837	2393	26	-2.40	-2.70	23687	7.80
70	2600	93	97	264	1080	2656	26	-1.10	-.90	23646	7.90
71	2600	95	99	265	1137	2708	26	-.1.30	-.90	23641	7.90
72	2600	102	106	264	1167	2762	26	-.70	-.90	23636	7.90
73	2600	101	106	265	1138	2743	26	-.60	-1.00	23633	7.90
74	2600	117	123	265	1353	2981	26	.90	.80	23595	8.00
76	2600	117	122	265	1368	2981	26	1.00	.80	23581	8.10
77	2600	113	118	264	1349	2940	26	.70	.80	23578	8.10
78	2200	75	77	269	39	1673	29	-2.40	-2.30	23518	8.20

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 143  
TGW 24300 TCG 1.5 AFT FLIGHT DATE 09/02/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
1	0231	0	0	265	-53	1367	27	-2.80	-2.80	18740	-2.70
2	4431	4	4	264	-39	1412	27	-2.80	-2.80	24821	-1.10
3	0231	0	0	265	-22	1441	27	-2.80	-2.80	24788	-1.10
4	4431	0	0	264	-53	1404	27	-2.80	-2.80	24734	-.90
5	2313	0	0	265	-38	1386	27	-2.80	-2.80	24682	-.80
6	2200	50	51	266	8	1384	26	-2.80	-2.80	24671	-.80
7	2313	35	35	265	-7	1363	26	-2.80	-2.80	24633	-.70
8	2200	58	59	270	9	1391	26	-2.80	-2.80	24625	-.70
9	2313	25	26	266	-36	1406	27	-2.80	-2.80	24556	-.50
10	0316	58	60	265	189	1522	26	-2.80	-2.80	24526	-.50
11	0300	59	60	265	388	1698	25	-2.80	-2.80	24516	-.40
12	0100	61	63	265	1072	2301	23	-2.80	-2.80	24453	-.30
13	0100	71	74	266	1166	2381	23	-2.80	-2.80	24431	-.20
14	0100	78	81	266	1244	2485	23	-2.40	-2.30	24404	-.20
15	2616	81	84	265	1232	2479	23	-2.30	-2.20	24398	-.10
16	0100	85	89	265	1431	2679	22	-1.90	-1.80	24368	-.10
17	0100	99	103	264	1182	2498	24	-.80	-.30	24335	
18	0149	106	111	266	1273	2636	24	-.40	.10	24303	.10
19	0153	114	119	265	1478	3088	26	.40	1.40	24262	.20
20	2022	114	120	266	1491	3070	25	.60	1.60	24248	.20
21	2616	100	105	265	1432	2892	24	-.90	-.40	24232	.20
22	2620	101	106	265	1761	3390	25	-.50	.10	24194	.30
23	0500	70	72	266	1290	2568	23	-2.70	-2.70	24180	.40
24	0500	73	76	267	1150	2414	23	-2.70	-2.70	24180	.40
25	0520	67	70	262	1012	2272	23	-2.70	-2.70	24177	.40
26	2615	100	104	266	1014	2372	24	-.50	.20	24166	.40
27	2616	108	112	266	1030	2389	24	-.40	.40	24147	.40
28	0100	58	60	265	1044	2320	23	-2.70	-2.70	24131	.50
29	0100	61	63	265	1053	2331	23	2.80	3.60	24122	.50
30	0100	68	71	265	1058	2346	24	2.80	3.50	24112	.50
31	0100	81	84	265	1135	2441	24	2.80	3.60	24101	.60
32	0100	93	96	266	1245	2592	24	2.80	3.50	24084	.60
33	0100	97	101	265	1216	2566	24	2.80	3.50	24073	.60
34	0149	107	112	265	1229	2556	24	2.80	3.50	24057	.70
35	2615	101	105	264	1137	2504	24	2.80	3.60	24040	.70
36	0153	119	124	265	1057	2478	25	2.80	3.50	23999	.80
37	2022	117	121	265	1073	2498	25	2.80	3.50	23994	.80
38	2616	104	108	265	1150	2529	24	2.80	3.50	23986	.80
39	0500	71	73	265	1014	2283	23	2.80	3.60	23959	.90
40	0500	68	70	263	750	2031	24	2.80	3.50	23956	.90
41	0520	69	71	263	629	1909	24	2.80	3.50	23956	.90
42	2200	55	56	266	116	1476	26	-2.70	-2.70	23923	1.00
43	2200	48	50	268	8	1451	27	-2.70	-2.70	23910	1.00
44	4731	27	27	266	39	1577	28	-2.70	-2.70	23885	1.10
45	4431	11	11	263	-53	1465	28	-2.70	-2.70	23869	1.10
46	4731	9	9	267	-52	1475	28	-2.70	-2.70	23861	1.10
47	0100	122	127	265	1573	3079	24	1.40	.80	17782	.10

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 143  
T0GW 24300 TECG 1.5 AFT FLIGHT DATE 09/02/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)
48	0100	132	138	265	1493	3019	25	1.40	1.50	17776
49	0153	140	147	265	1652	3205	25	1.40	1.50	17763
50	3334	140	147	265	1637	3203	25	1.40	1.50	17757

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 151  
T8GW 20800 T8CG 9.7 AFT FLIGHT DATE 09/13/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
2	2313	70	71	265	161	1425	25	-2.80	-2.90	21369	-9.50
3	0148	78	81	265	1263	2277	21	-2.50	-2.70	21315	-9.30
4	0148	85	101	264	1262	2275	21	-2.00	-2.20	21292	-9.30
5	0148	98	101	265	1296	2298	21	-1.10	-1.10	21266	-9.20
6	0150	112	116	265	1328	2374	21	-.20	-.20	21240	-9.20
7	0149	119	122	265	1088	2196	22	.90	.90	21212	-9.10
8	0150	126	130	265	1001	2152	22	1.40	1.30	21176	-9.00
9	2615	107	111	266	1262	2329	21	-.20	-.30	21130	-8.90
10	2616	118	122	265	1264	2358	21	.60	.70	21114	-8.80
11	2615	118	122	266	1172	2253	22	.80	.90	21096	-8.80
12	2616	119	123	265	1280	2342	21	.70	.80	21071	-8.80
13	0148	77	84	265	5162	6224	13	-2.50	-2.80	20929	-8.40
14	0149	92	101	265	5095	6196	14	-1.70	-1.80	20914	-8.40
15	0149	99	108	265	5009	6135	14	-1.00	-1.60	20878	-8.30
16	0149	107	117	265	5113	6245	14	-.30	-.30	20849	-8.20
17	0150	110	121	265	5324	6485	14			20801	-8.10
18	2616	106	116	265	5129	6237	14	-.30	-.30	20757	-8.00
19	2615	106	116	265	5079	6203	14	-.20	-.20	20741	-8.10
20	2616	90	99	265	5042	6131	14	-1.80	-1.90	20700	-7.90
21	0148	82	90	264	5193	6244	13	2.60	2.60	20677	-7.80
22	0148	82	91	266	5268	6319	13	2.80	3.70	20667	-7.80
23	0148	80	88	265	5268	6318	13	2.80	3.70	20656	-7.80
24	0149	91	100	265	5114	6138	14	2.80	3.80	20636	-7.70
25	0149	100	110	265	5185	6297	14	2.80	3.80	20613	-7.70
26	0150	109	120	265	5250	6386	14	2.80	3.80	20592	-7.60
27	0150	119	131	264	5217	6398	14	2.80	3.70	20538	-7.50
28	2615	105	115	265	5097	6225	14	2.80	3.80	20487	-7.40
29	2616	106	116	265	5080	6217	14	2.80	3.80	20474	-7.40

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 161  
TGW 20800 TCG 22.4 FWD FLIGHT DATE 09/30/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	GAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
2	2313	29	30	265	2241	2575	13	-2.70	-2.70	21299	23.20
3	0148	62	65	265	2287	2644	13	-2.70	-2.70	21271	23.20
4	0148	90	94	265	2286	2660	13	-1.80	-1.90	21235	23.40
5	0149	116	121	265	2303	2755	14	.40	.40	21186	23.60
6	0150	130	135	274	1985	2512	15	1.50	1.30	21135	23.80
7	0150	137	142	285	2011	2553	15	1.50	1.40	21081	24.00
8	0154	147	152	271	1588	2225	17	1.50	1.40	21050	24.10
9	2200	118	120	267	366	942	19	.80	.80	20693	25.40

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 162  
TOWN 20800 TBCG 22.4 FWD FLIGHT DATE 10/07/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP	HD (FT)	SAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
2	0150	130	133	265	2394	2146	8	1.40	1.40	21281	23.20
3	0150	140	145	265	2443	2226	8	1.40	1.40	21245	23.40
4	0154	153	158	265	2268	2132	9	1.40	1.40	21191	23.60
5	0154	155	160	265	2392	2257	9	1.50	1.40	21145	23.80
6	0154	156	161	265	2089	2014	10	1.50	1.50	21076	24.00

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 163  
TGW 21500 TCG 22.4 FWD FLIGHT DATE 10/04/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
1	2615	91	94	265	2398	2090	7	-1.70	-1.80	21251	23.40
2	2616	91	94	264	2473	2144	7	-1.90	-2.00	21238	23.50
3	2615	89	92	265	2429	2042	7	-1.80	-1.80	21220	23.60
4	2616	93	96	264	2383	2051	7	-1.90	-2.00	21210	23.60
5	2615	87	90	266	2333	2008	7	-1.80	-1.90	21181	23.70
6	2616	92	94	265	2357	2029	7	-2.10	-2.10	21176	23.70
7	2801	127	131	267	2331	2158	8	1.40	1.40	21127	24.00
8	0150	133	139	265	3235	3058	7	1.40	1.40	21055	24.20
9	2900	152	159	266	2757	2694	9	1.40	1.40	21014	24.40
10	2900	154	161	265	3098	3012	8	1.40	1.40	20958	24.50
11	2900	161	167	265	2938	2833	8	1.50	1.40	20773	25.30
12	2900	160	167	265	3233	3150	7	1.50	1.40	20703	25.60
13	3404	28	29	265	2332	1979	7	-2.70	-2.70	20629	25.80
14	3404	29	30	265	2368	2014	7	-2.70	-2.70	20624	25.90
15	3404	31	32	264	2392	2044	7	-2.70	-2.70	20618	25.90
16	3401	34	35	265	2415	2062	7	-2.70	-2.70	20618	25.90
17	3407	31	32	265	2415	2043	7	-2.70	-2.70	20613	25.90
18	0150	131	137	265	2951	2774	7	1.40	1.40	20526	26.30
19	0150	130	136	265	2967	2780	7	2.80	3.80	20516	26.30
20	0150	135	141	265	2854	2710	8	2.80	3.90	20495	26.40
21	0150	145	150	265	2622	2499	8	2.80	3.90	20482	26.50
22	0154	156	161	265	2271	2206	10	2.80	3.90	20446	26.60

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 166  
TGW 20800 TCG 9.7 AFT FLIGHT DATE 10/06/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
2	0150	133	140	265	3086	3530	12	1.40	1.40	21323	-9.40
3	2937	148	157	287	3212	3778	13	1.40	1.40	21189	-9.00
4	2937	150	159	286	3177	3725	13	1.40	1.40	21086	-8.80
5	0149	121	125	265	1635	1966	14	.90	1.00	20916	-8.40
6	0150	130	134	265	1648	1991	14	1.40	1.40	20893	-8.30
7	0150	135	139	265	1787	2097	14	1.40	1.40	20870	-8.30
8	0150	144	148	265	1444	1823	15	1.40	1.40	20855	-8.30
9	0113	129	132	265	1582	1863	14	2.80	3.80	20827	-8.20
10	0113	138	142	265	1539	1902	15	2.80	3.80	20808	-8.10
11	0113	147	150	265	1226	1647	16	2.80	3.90	20791	-8.10

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 167  
T8GW 25000 T8CG 4.35 FWD FLIGHT DATE 10/06/77

EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
4	1400	0	0	262	-94	-178	14	-2.80	-2.80	24459	4.50
5	0150	123	129	265	3082	3219	10	.90	1.00	24730	5.00
6	2900	116	121	265	2985	3081	9	.20	.30	24555	5.50
7	2900	116	122	265	3032	3148	10	.40	.50	24512	5.60
8	2900	115	120	265	2987	3131	10	.40	.40	24476	5.70
9	2801	109	115	265	3156	3273	9	-10	-20	24416	5.80
10	2900	108	113	264	3055	3232	10	-40	-40	24319	6.10
11	2616	81	84	264	2004	1916	10	-2.40	-2.50	24242	6.40
12	2615	79	81	264	1870	1779	10	-2.50	-2.70	24234	6.40
13	2616	83	85	264	1789	1707	10	-2.40	-2.60	24218	6.40
15	0900	0	0	247	-94	-243	13	2.80	-1.00	23987	7.00

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FLIGHT SUMMARY

AIRCRAFT SLP1 FLIGHT 177  
T8GW 20800 T8CG 9.7 AFT FLIGHT DATE 10/20/77

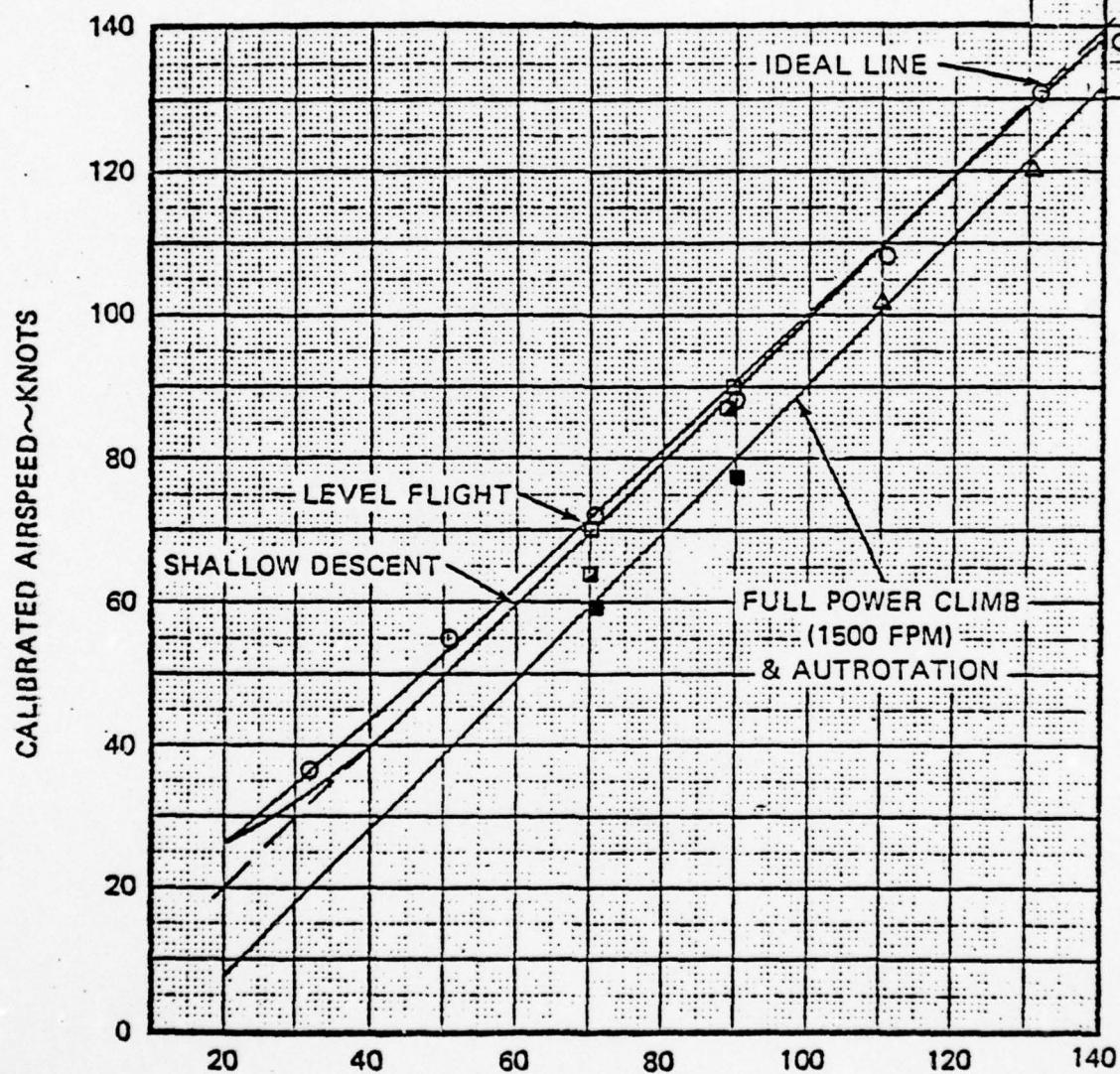
EVENT NO	MAN CODE	IAS (KT)	TAS (KT)	RPM	HP (FT)	HD (FT)	BAT (C)	FCYC (DEG)	ACYC (DEG)	RGW (LB)	RCG (IN)
2	0828	0	0	266	213	334	15	2.80	-1.00	21495	-9.80
3	0150	113	124	263	6402	6344	1	-.40	-.40	21305	-9.30
4	0150	126	138	263	6164	6116	2	1.00	1.20	21279	-9.30
5	-0154	130	143	263	6383	6377	2	1.40	1.40	21238	-9.20
6	3334	131	144	263	6335	6298	2	1.40	1.40	21225	-9.10
7	0154	139	153	264	6206	6233	2	1.40	1.40	21191	-9.10
8	2615	114	125	264	6278	6190	1			21168	-9.00
9	2615	115	126	263	6132	6086	2			21156	-9.00
10	0150	112	123	264	6221	6167	2	-.30	-.30	21127	-8.90
11	0154	129	142	263	6184	6206	2	1.30	1.40	21104	-8.80
12	0154	134	147	263	6066	6089	3	1.40	1.40	21083	-8.80
13	3334	131	144	263	6073	6125	3	1.40	1.40	21076	-8.80
14	0154	138	150	263	5789	5783	3	1.40	1.40	21063	-8.70
15	0600	80	88	290	6468	6237	0	-2.50	-2.50	21035	-8.70
16	2637	83	90	290	6165	5928	0	-2.50	-2.50	21035	-8.70
17	2637	82	89	288	5379	5154	2	-2.30	-2.40	21029	-8.70
18	0423	70	75	270	4891	4645	3	-2.70	-2.80	21029	-8.70
19	0149	123	130	263	3910	3660	5	1.10	1.20	20986	-8.50
20	0150	134	142	263	4081	3880	5	1.40	1.40	20965	-8.50
21	3334	133	141	264	3996	3898	6	1.40	1.40	20952	-8.50
22	-0150	141	148	263	3761	3579	6	1.40	1.40	20937	-8.40
23	0154	154	161	263	3194	3124	8	1.40	1.40	20924	-8.40
24	0150	133	137	263	2411	2336	9	1.40	1.40	20857	-8.30
25	0150	136	141	264	2220	2203	10	1.40	1.40	20831	-8.30
26	0154	149	153	263	1979	2027	11	1.40	1.40	20819	-8.20
27	0154	155	160	264	2060	2136	11	1.40	1.40	20788	-8.20
28	2615	86	89	262	2349	2154	8	-2.30	-2.60	20757	-8.00
29	2616	98	101	263	2281	2099	9	-1.80	-1.80	20755	-8.00
30	2615	86	89	262	2317	2125	8	-2.30	-2.40	20739	-8.00
31	2616	90	93	264	2185	2028	9	-1.80	-1.90	20734	-8.00
32	2616	54	55	263	2393	2143	8	-2.70	-2.70	20713	-7.90
33	2615	52	54	263	2347	2105	8	-2.70	-2.70	20708	-7.90
34	2616	139	144	264	2380	2372	10	1.40	1.40	20670	-7.80
35	0150	132	137	265	2363	2361	10	1.40	1.30	20664	-7.80
36	2810	136	141	265	2317	2286	10	1.40	1.40	20649	-7.80
37	0150	136	141	263	2394	2342	9	1.40	1.40	20616	-7.70
38	0150	140	145	263	2347	2322	10	1.40	1.40	20595	-7.60
39	0154	160	164	264	1714	1831	12	1.40	1.40	20579	-7.60
40	0149	130	137	263	3761	3551	5	1.40	1.40	20520	-7.50
41	0150	137	144	263	3724	3533	6	1.40	1.40	20500	-7.40
42	1900	141	149	263	3575	3432	6	1.40	1.40	20492	-7.40
43	0154	157	165	263	3080	3030	8	1.40	1.40	20484	-7.40
44	3220	153	160	264	2948	2914	8	1.40	1.40	20482	-7.40
45	2200	44	45	265	423	416	14	-2.70	-2.80	20374	-7.10
46	0900	0	0	258	213	344	15	-2.80	-1.00	20343	-7.00

## 3.3 Airspeed Calibration

The airspeed calibration (Flight 186) was made on the theodolite range at NATC, Patuxent River, Md., prior to starting the structural demonstration. Level flight points were obtained from 30 KIAS to  $V_H$  (140 KIAS). Runs were made up range and down range to cancel wind effect. A full power dive was performed at 160 KIAS. Auto rotation was performed at 110, 130 and 150 KIAS.

Climbs were performed at 500 and 1000 FPM and maximum power at 70 and 90 KIAS. The calibration chart is presented in Figure 4 superimposed on the calibrated/indicated airspeed chart from the CH-46E Flight Manual, Reference 3.

MODEL: H-46E  
ENGINE: T58 - GE - 16  
DATA BASIS: CALIBRATION



INDICATED AIRSPEED~KNOTS  
(CORRECTED FOR INSTRUMENT ERROR)

NATC AIRSPEED CALIBRATION: THEODOLITE RANGE

- LEVEL FLIGHT
- DIVE
- △ AUTOROTATION
- CLIMB 500 fpm
- " 1000 "
- " MAX POWER

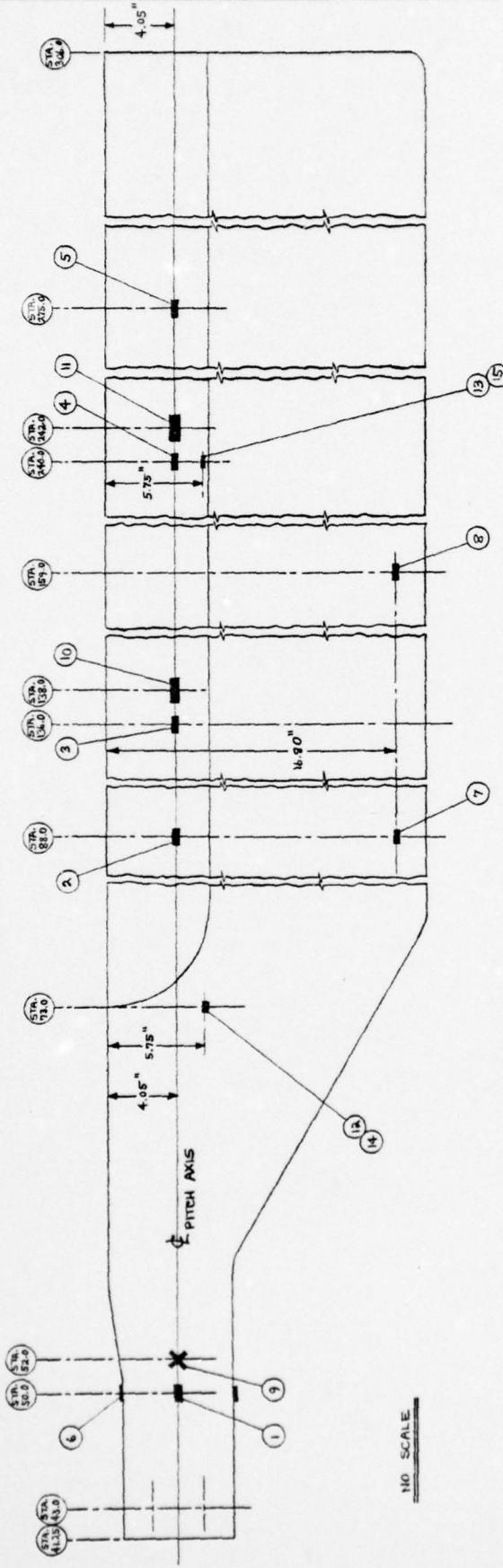
(RANGE WIND CORRECTED THEODOLITE DATA)

## 3.4 Instrumentation

A description of all stress instrumentation is shown on the following pages. A flight by flight summary of operative gages is found starting on Page 71 of Reference 2.

<u>Description</u>	<u>Page</u>
Rotor Blade	92
Rotor Hub	93
Rotating Controls	94
Forward Stationary Controls	95
Aft Stationary Controls	96
Forward Rotor Shaft	97
Aft Rotor Shaft	98
Rotor Blade Motions (Lead-Lag, Flap, Pitch)	99

CH-46 COMPOSITE ROTOR BLADE FLIGHT TEST PROGRAM  
FORWARD AND AFT ROTOR BLADE INSTRUMENTATION



NO.	AFT BLADE GAGE CODE	FWD BLADE GAGE CODE	ITEM	AFT BLADE FWD BLADE SPARE GAGE CODE	FWD BLADE SPARE GAGE CODE
1	4971	4171	FLAPWISE 2, STA. 50.	6971	6171
2	4972	4172	FLAPWISE 2, STA. 88.	6972	6172
3	4973	4173	FLAPWISE 2, STA. 136.	6973	6173
4	4974	4174	FLAPWISE 2, STA. 240.	6974	6174
5	4975	4175	FLAPWISE 2, STA. 215.	6975	6175
6	4976	4176	CHORDWISE 2, STA. 50.	6976	6176
7	4977	4177	T.E. TENSION 2, STA. 88.	6977	6177
8	4978	4178	T.E. TENSION 2, STA. 159.	6978	6178
9	4979	4179	TORSION 2, STA. 52.	6979	6179
10	4980	4180	TORSION 2, STA. 138.	6980	6180
11	4981	4181	TORSION 2, STA. 242.	6981	6181
12	4982	4182	ABSOLUTE STRESS, STA. 73. (TOP SURF)	—	—
13	4984	4184	ABSOLUTE STRESS, STA. 240. (TOP SURF)	—	—
14	4983	4183	ABSOLUTE STRESS, STA. 73. (BMT. SURF.)	—	—
15	4985	4185	ABSOLUTE STRESS, STA. 240. (BMT. SURF.)	—	—

REF. DRAWING NO. A00FT-5938.

FIGURE 5.

SHEET 92

**CH-46 COMPOSITE ROTOR BLADE FLIGHT TEST PROGRAM**  
**FWD AND AFT ROTOR HUB INSTRUMENTATION**

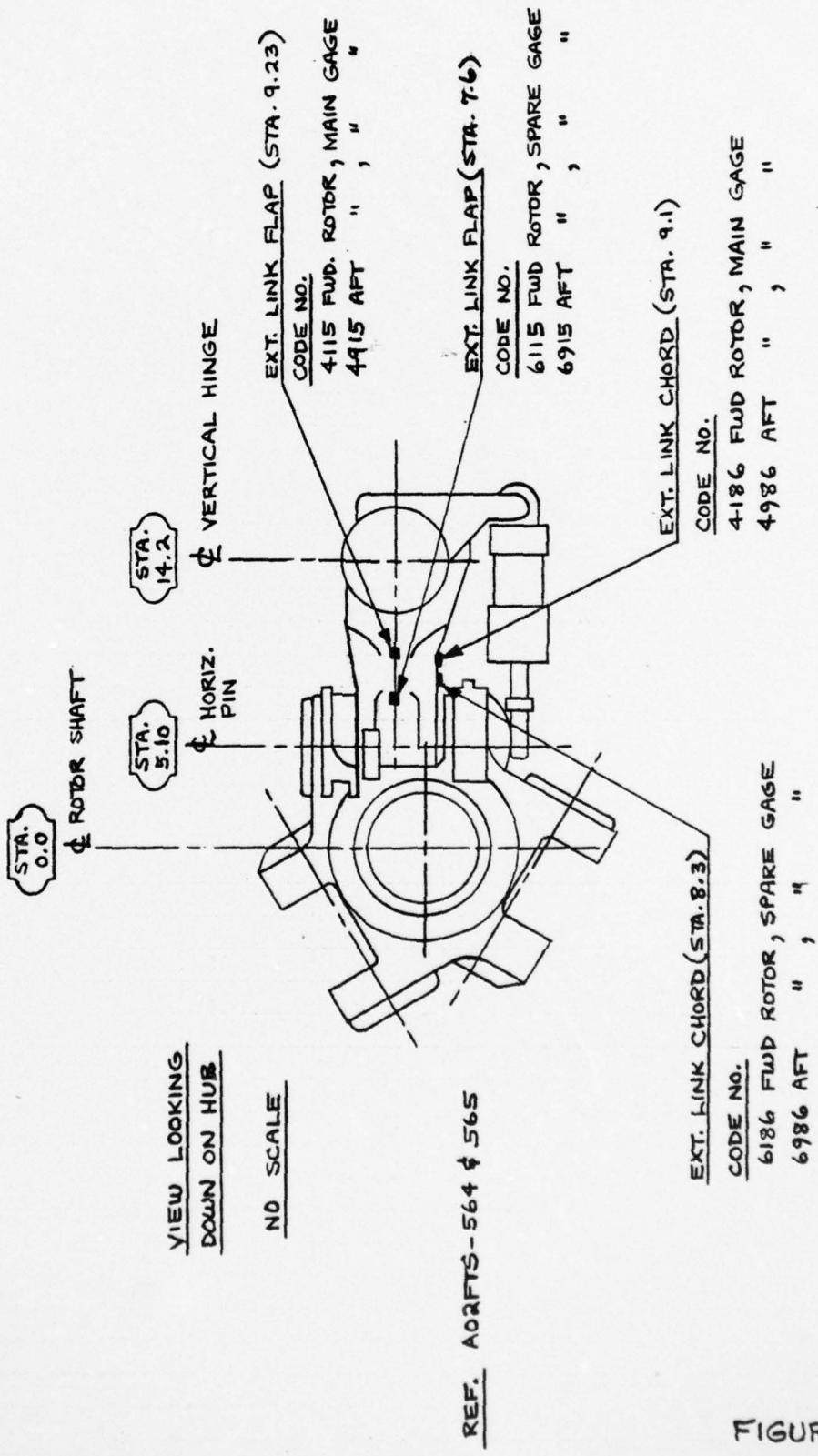


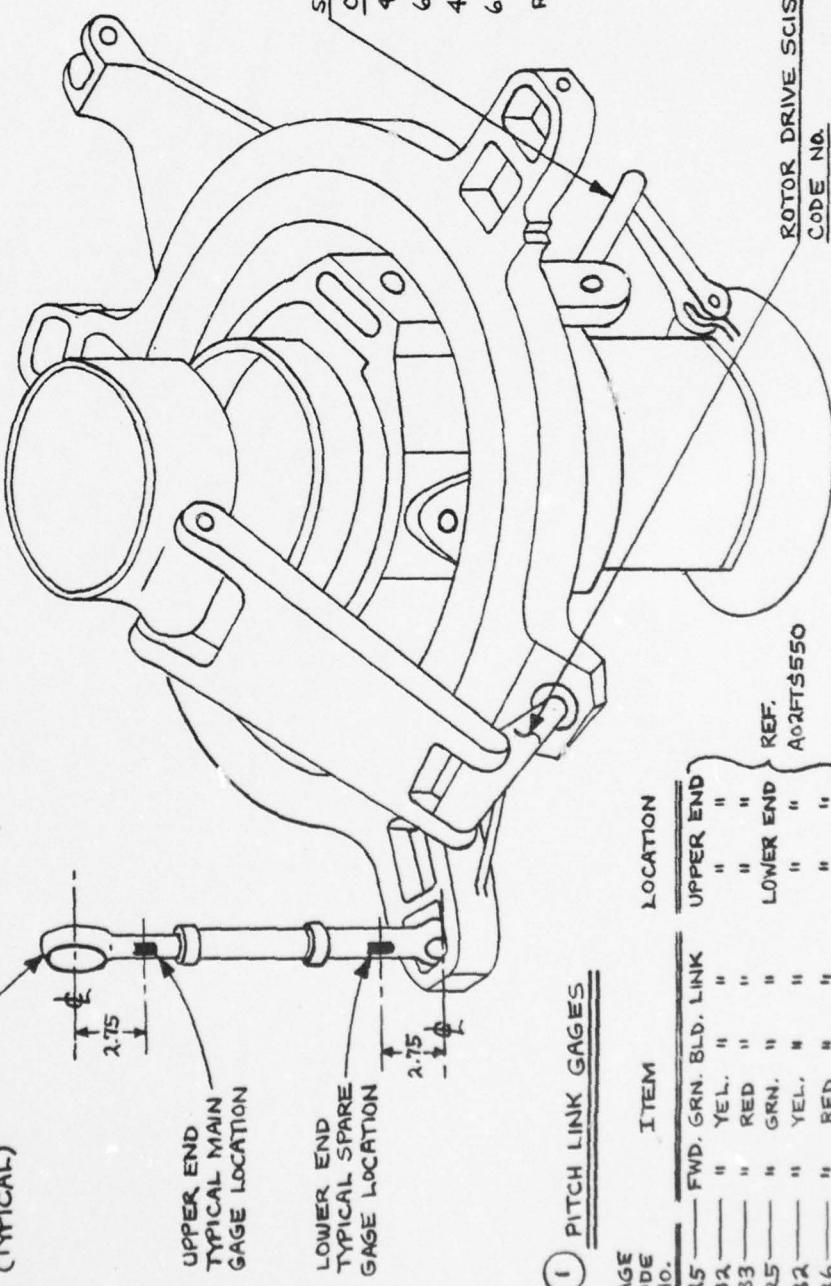
FIGURE 6

**CH-46 COMPOSITE ROTOR BLADE FLIGHT TEST PROGRAM**

**FWD AND AFT ROTOR CONTROLS INSTRUMENTATION**



NO SCALE



<u>STATIC SCISSORS</u>	
CODE NO.	
4364	- MAIN GAGE, FWD ROTOR
6310	- SPARE " , "
4967	- MAIN " , AFT "
6510	- SPARE " , "
REF.	A02FT\$562 (FWD)
	A02FT\$563 (AFT)

**① PITCH LINK GAGES**

GAGE CODE NO.	ITEM	LOCATION	
		FWD. BLD. LINK	UPPER END
4125	"	"	"
4132	"	YEL.	"
4133	"	RED	"
6125	"	GRN.	"
6132	"	YEL.	"
6136	"	RED	"
4925	AFT GRN. BLD. LINK	UPPER END	
4966	"	YEL.	"
4958	"	RED	"
6925	"	GRN.	"
6966	"	YEL.	"
6958	"	RED	"

<u>ROTOR DRIVE SCISSORS</u>	
CODE NO.	
4134	- MAIN GAGE, FWD ROTOR
4136	- SPARE " , "
4946	- MAIN " , AFT "
4944	- SPARE " , "
REF.	A02FT\$560 (FWD)
	A02FT\$561 (AFT)

AD-A075 566

BOEING VERTOL CO PHILADELPHIA PA

CH-46 COMPOSITE ROTOR BLADE FLIGHT STRESS SURVEY DATA. VOLUME I--ETC(U)

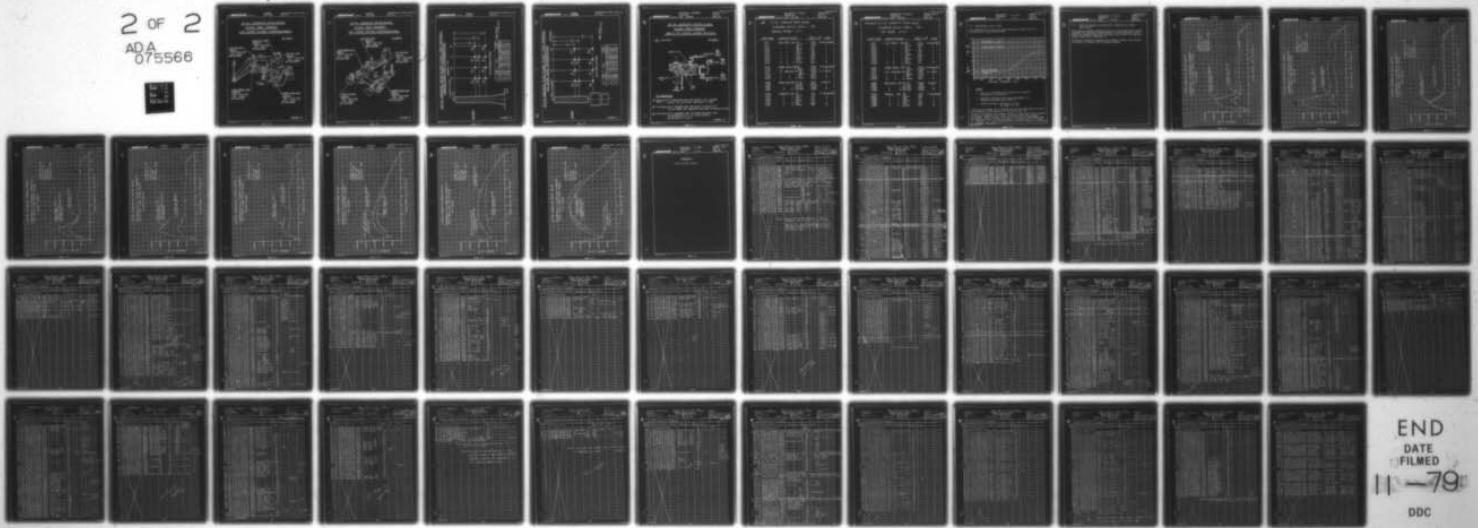
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NL

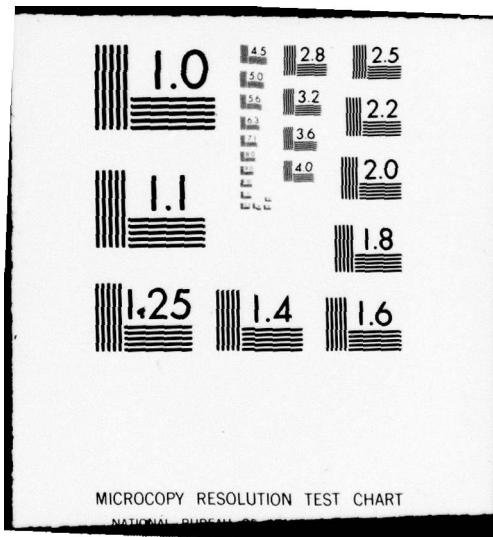
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2 OF 2  
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DATE  
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11-79  
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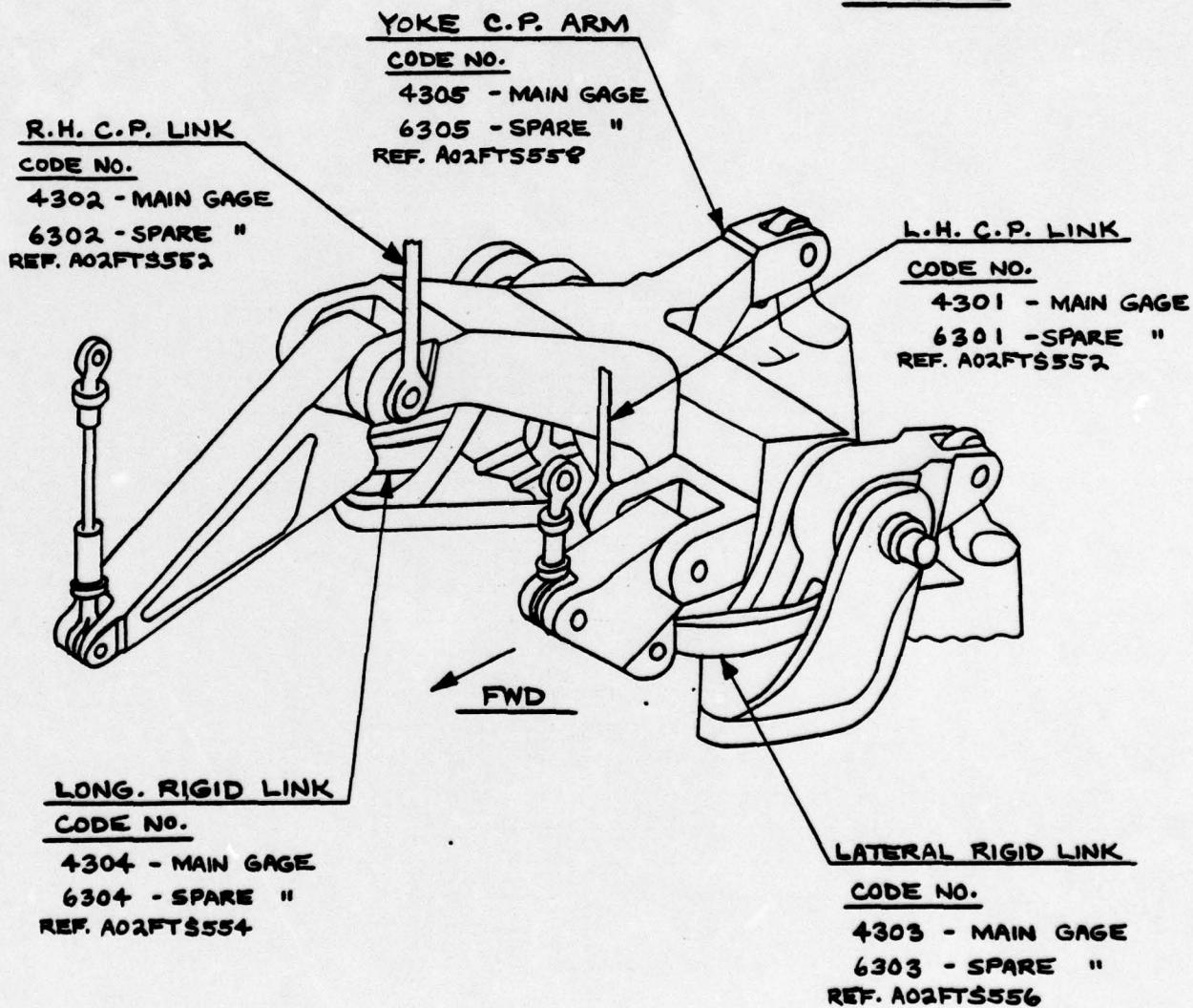
CH-46 COMPOSITE ROTOR BLADEFLIGHT TEST PROGRAMFWD UPPER CONTROL INSTRUMENTATIONNO SCALE

FIGURE 8

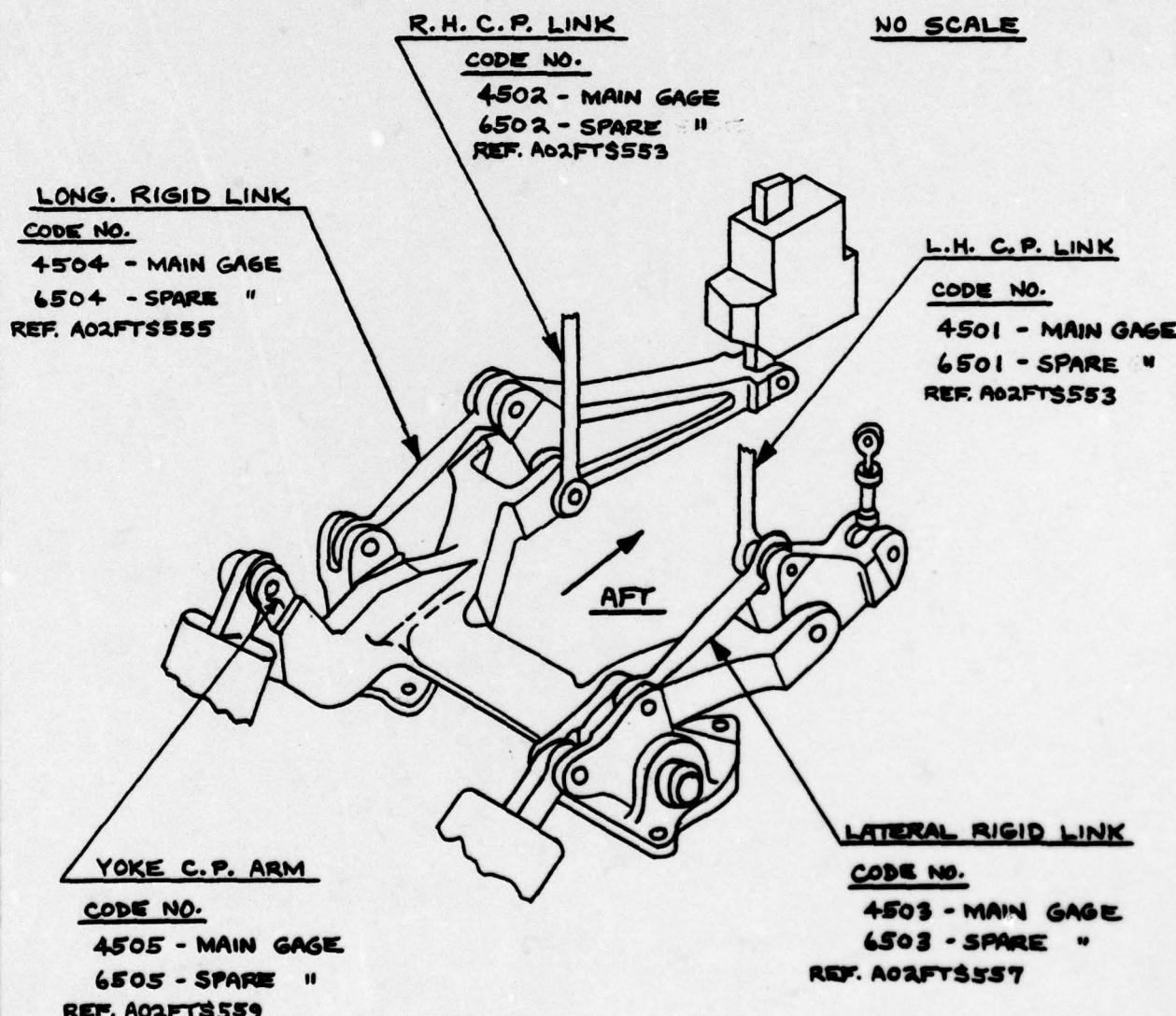
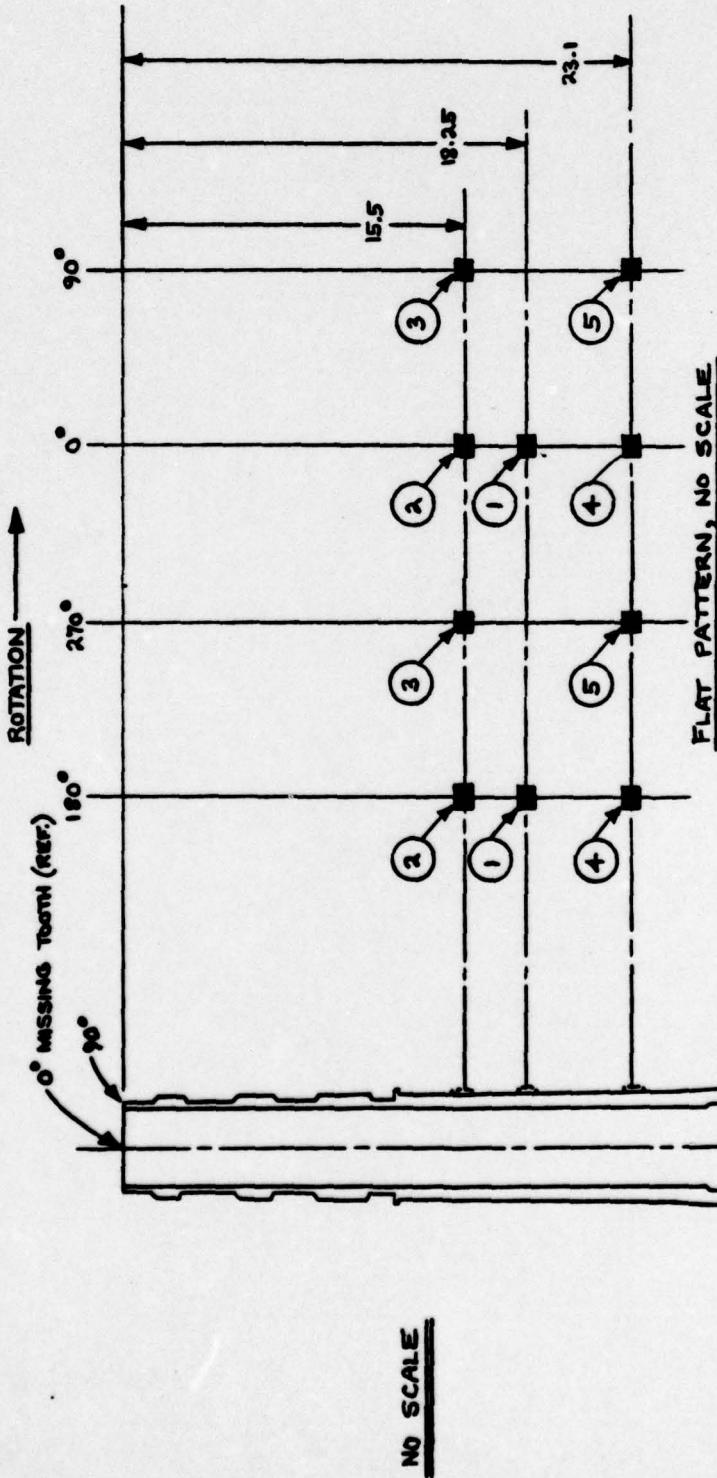
CH-46 COMPOSITE ROTOR BLADEFLIGHT TEST PROGRAMAFT UPPER CONTROL INSTRUMENTATION

FIGURE 9

**CH-46 COMPOSITE ROTOR BLADE FLIGHT TEST PROGRAM**  
**FORWARD ROTOR SHAFT INSTRUMENTATION**

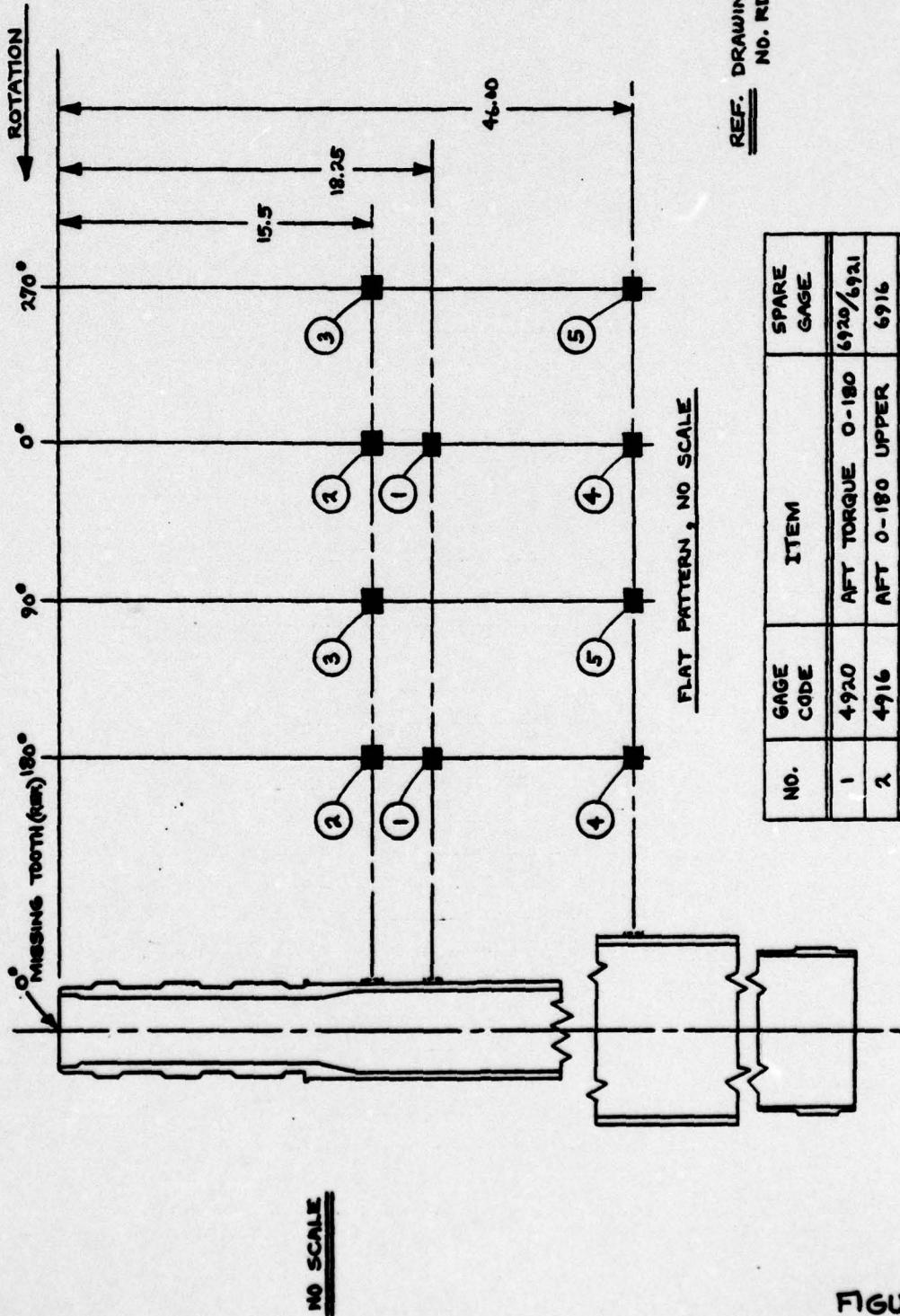


NO.	GAGE CODE	ITEM	SPARE GAGE
1	4120	FUD TORQUE 0-180	4121/5120
2	4116	FUD 0-180 UPPER	6116
3	4117	FUD 90-270 UPPER	6117
4	4137	FUD 0-180 LOWER	6187
5	4188	FUD 90-270 LOWER	6188

REF. DRAWING  
No. RD2FT5641



FIGURE 10

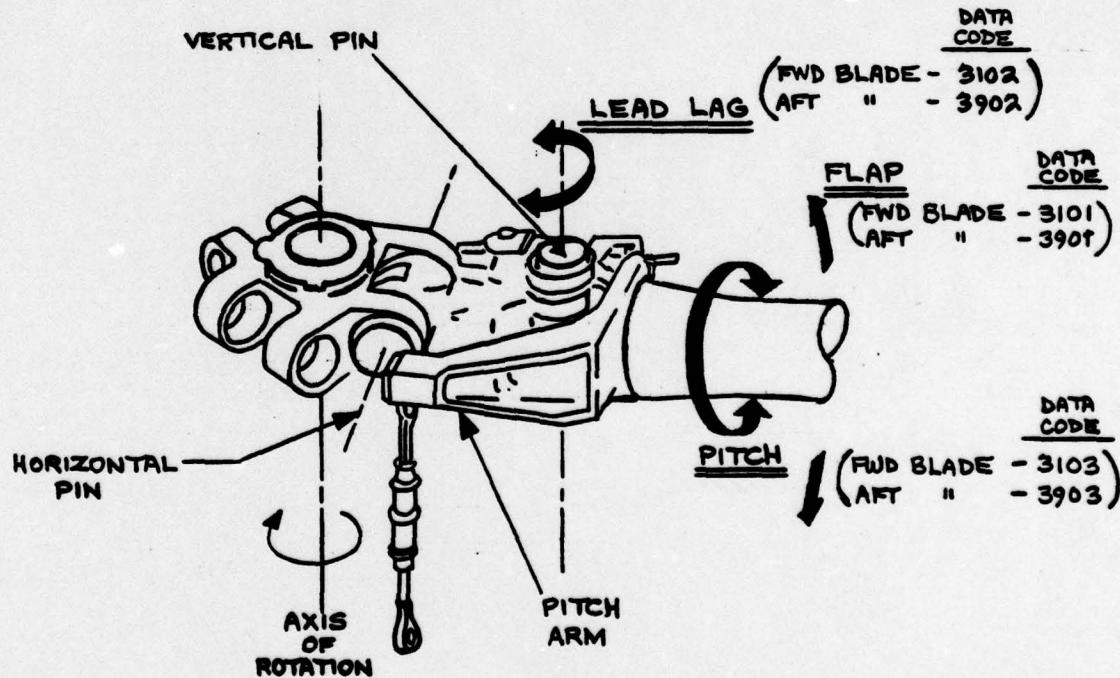
**CH-46 COMPOSITE ROTOR BLADE FLIGHT TEST PROGRAM****AFT ROTOR SHAFT INSTRUMENTATION**

NO.	GAGE CODE	ITEM	SPARE GAGE
1	4920	AFT TORQUE 0-180	6920/6921
2	4916	AFT 0-180 UPPER	6916
3	4917	AFT 90-270 UPPER	6917
4	4923	AFT 0-180 LOWER	6923
5	4924	AFT 90-270 LOWER	6924

**FIGURE 11**

CH-46 COMPOSITE ROTOR BLADE  
FLIGHT TEST PROGRAM  
FWD & AFT ROTOR BLADE MOTIONS

REF. A02FT5927

NO SCALE0° ORIENTATION

- ① LEAD-LAG, 0° is measured when the blade is full forward angle against the lead stop. (lag back is plus).
- ② FLAP ANGLE, 0° is measured when the blade is straight out (i.e., 0° about the horizontal pin, blade up position is plus).
- ③ PITCH ANGLE, 0° is measured when the blade horizontal axis at 75% radius is in flat pitch position. (blade nose up is plus).

FIGURE 12

## 3.5 CH-46 COMPOSITE ROTOR BLADE

CALIBRATED SECTION MODULI,  $C/EI$ 

FORWARD BLADE, A-1-3

<u>DATA CODE</u>	<u>IDENTIFICATION</u>	<u><math>C/EI \sim 10^6</math></u>	<u>NOTES</u>
4171	FLAP BEND, STA 50	.0760	(4 ARM BRIDGE)
6171	50 SP.	.0762	
4172	88	.181	
6172	88 SP.	.179	
4173	136	.187	
6173	136 SP.	.187	
4174	240	.244	
6174	240 SP.	.243	
4175	275	.221	
6175	275 SP	.220	
4176	CHORD BEND, STA 50	.0572	(4 ARM BRIDGE)
6176	" " 50 SP.	.0543	↓
4177	T.E. TENSION STA. 88	.0816	(T GAGE)
6177	88 SP.	.0827	
4178	159	.0846	
6178	159 SP.	.0861	
4182	ABSOLUTE, STA. 73 TOP	.0557	(DIRECT)
4183	73 BTM	.0562	
4184	240 TOP	.0660	
4185	240 BTM	.0592	
4179	TORSION, STA 52	.134	(4 ARM BRIDGE)
6179	52 SP.	.145	
4180	138	.197	
6180	138 SP.	.197	
4181	242	.223	
6181	242 SP.	.223	

THE **BOEING** COMPANY

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CHECKED BY:  
DATE: 4/7/78

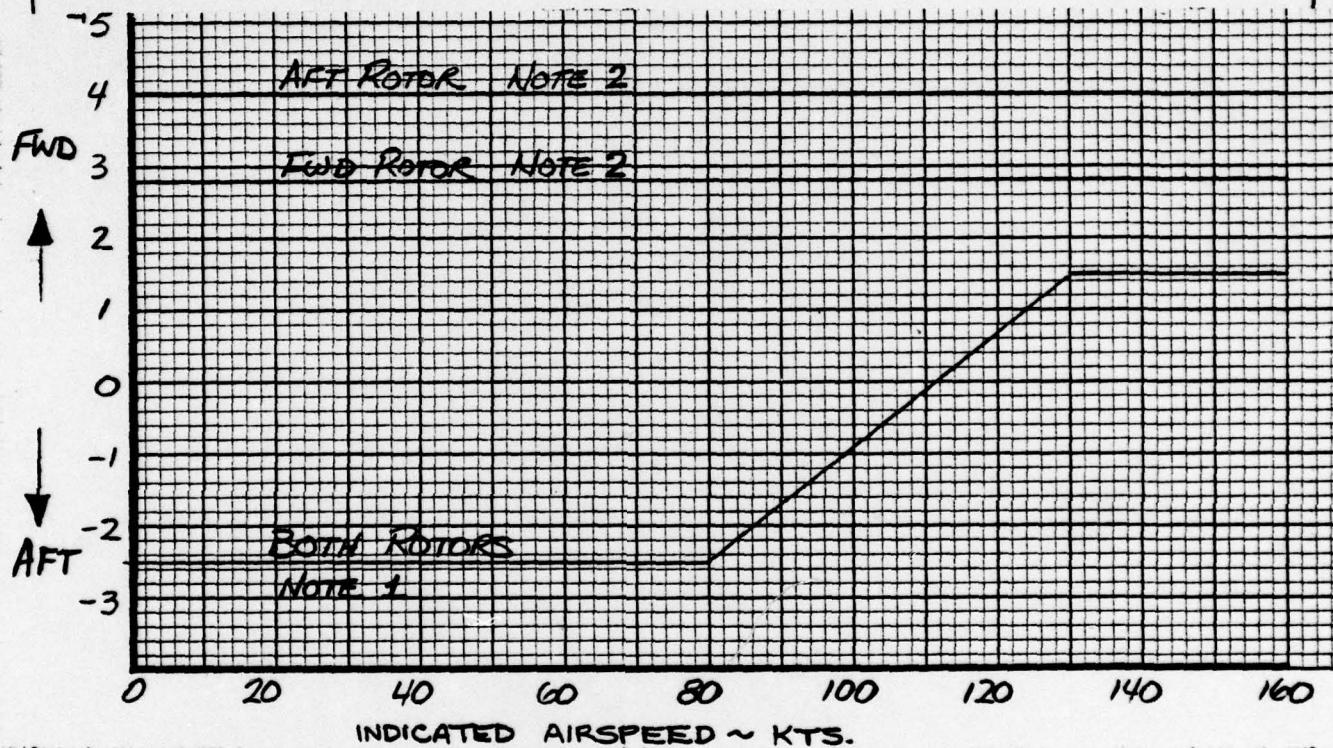
D210-11168-3  
NUMBER VOL. 1  
REV LTR  
MODEL NO.

3.5 CONT'D CH-46 COMPOSITE ROTOR BLADE  
CALIBRATED SECTION MODULI, C/EI  
AFT BLADE, A-2-7

<u>DATA CODE</u>	<u>IDENTIFICATION</u>	<u>C/EI ~ <math>10^6</math></u>	<u>NOTES</u>
4971	FLAP BEND, STA 50	.0741	
6971	50 SP.	.0793	(4 ARM BRIDGE)
4972	88	.181	
6972	88 SP.	.181	
4973	136	.195	
6973	136 SP.	.193	
4974	240	.242	
6974	240 SP.	.241	
4975	275	.216	
6975	275 SP.	.211	
4976	CHORD BEND, STA. 50	.0542	(4 ARM BRIDGE)
6976	" " " 50 SP.	.0555	↓
4977	T.E. TENSION, STA. 88	.0737	(T GAGE)
6977	88 SP.	.0749	
4978	159	.0817	
6978	159 SP.	.0817	
4982	ABSOLUTE, STA 73 TOP	.0536	(DIRECT)
4983	73 BTM.	.0532	
4984	240 TOP	.0660	
4985	240 BTM	.0566	
4979	TORSION, STA. 52	.135	(4 ARM BRIDGE)
6979	52 SP.	.138	
4980	138	.191	
6980	138 SP.	.191	
4981	242	.214	
6981	242 SP.	.214	

## 3.6 LONGITUDINAL CYCLIC TRIM

The longitudinal cyclic trim used during the stress survey is illustrated in the diagram below.

NOTES:

1. ECP 230 "q" sensed trim schedule for density altitudes up to 6000 ft.
2. Manually selected trim (fully extended) for density altitudes above 6000 ft.
3. Blade Fold/Taxi; Fwd Head 2.8° Fwd  
Aft Head 0.5° Aft

A series of flights (X-132 through X-135) was conducted for cyclic trim schedule investigations at design GW, aft CG.

Flights 132 through 135 consist of level flight cyclic trim sweeps at various speeds at 2000, 6000, 8000 and 12000 feet density altitudes. These flights have very few events at programmed trim and therefore have not been included in the TAS plots in Volumes 2 through 8. All tabulated data for these flights is presented in Volumes 9 through 12.

PREPARED BY: R. Aiello  
CHECKED BY:  
DATE: 7/7/78D210-11168-3  
NUMBER Vol. 1  
REV LTR  
MODEL NO.

### 3.7 Spanwise Moment Distributions, Composite and Metal Spar Blades

This section presents spanwise plots of high-speed level flight flapwise and chordwise bending moment for the composite rotor blade and compares them with the metal spar blade for identical flight conditions (Reference 4).

Figures 13 through 18 compare the flapwise moments and Figures 19 through 21 compare the chordwise moments.

24.4% COMPOSITE ROTOR BLADE  
COMPARISON OF FLAPWISE MOMENTS  
WITH METAL SPAR ROTOR BLADE  
AFT Rotor

22300 LB G.W.  
25° Fwd C.G.  
2000' Hd  
264 RPM  
140 KNOTS TAS

METAL BLADE, REF. 4,  
FLIGHT 555-13

COMPOSITE BLADE,  
FLIGHT 1/4 R

25000

20000

15000

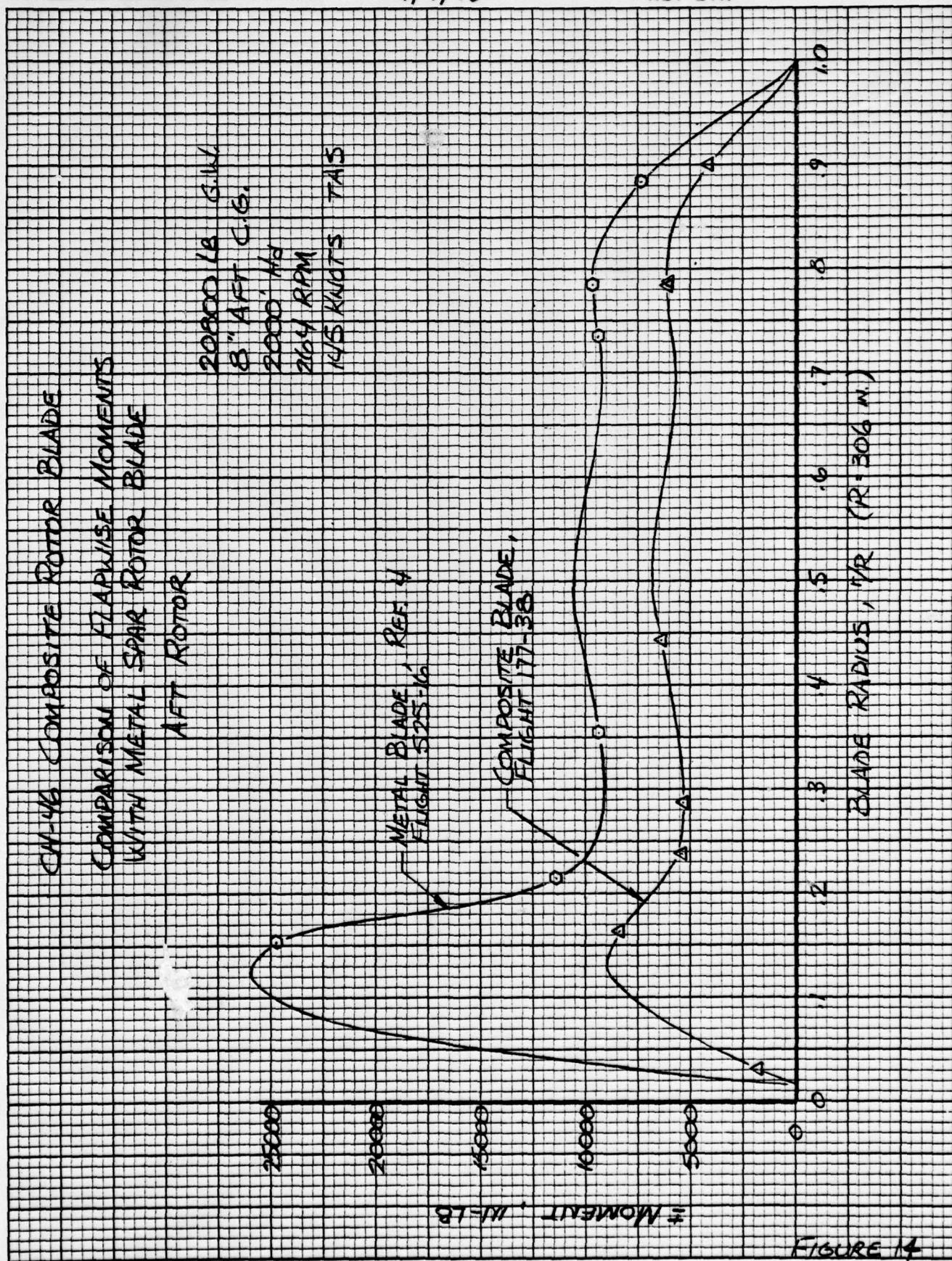
10000

5000

0

= MOMENT, N-LB

FIGURE 13



CH-46 COMPOSITE ROTOR BLADE  
COMPARISON OF FLAPWISE MOMENTS  
WITH METAL SDAR ROTOR BLADE  
AFT ROTOR

20000 LB G.W.  
8" AFT C.G.  
6000 RPM  
2641 RPM  
122 KNOTS TAS

METAL BLADE REF 4.  
FLIGHT 528.4

COMPOSITE BLADE  
FLIGHT 177-3

± MOMENT IN-LB



BLADE RADII 1/4  
(R = 306 m)

CH-46 COMPOSITE ROTOR BLADE  
COMPARISON OF FLAPWISE MOMENTS  
WITH METAL SPAR ROTOR BLADE

FORWARD ROTOR

20000 LB C.W.  
25° FWD C.G.  
2000 1/4°  
2164 RPM  
140 KNOTS TAS

25000

20000

15000

10000

5000

0

MOMENT, N-LE

1.0

.9

.8

.7

.6

.5

.4

.3

.2

.1

0

BLADE RADIUS, 1/2 (R = 306 IN)

CH-46 COMPOSITE Rotor Blade  
COMPARISON OF FLAPWISE MOMENTS  
WITH METAL SPAR Rotor Blade  
FORWARD ROTOR

20200 1/8 G.W.

3" AET C.G.

20200 1/8

264 RD1

145 KNOTS TAS

METAL BLADE, Ref. 4  
FLIGHT 525-16OUTBOARD INSTRUMENTATION  
NOT AVAILABLE25000  
20000  
15000  
10000  
5000

+ MOMENT, IN-LB

COMPOSITE BLADE,  
FLIGHT 17-38

FIGURE 17

CH-46 COMPOSITE ROTOR BLADE  
COMPARISON OF FLAPWISE MOMENTS  
WITH METAL SPAR ROTOR BLADE  
FORWARD ROTOR

20000 LB G.W.  
8" AFT C.G.  
6000' HD  
2601 RPM  
122 KNOTS TAS

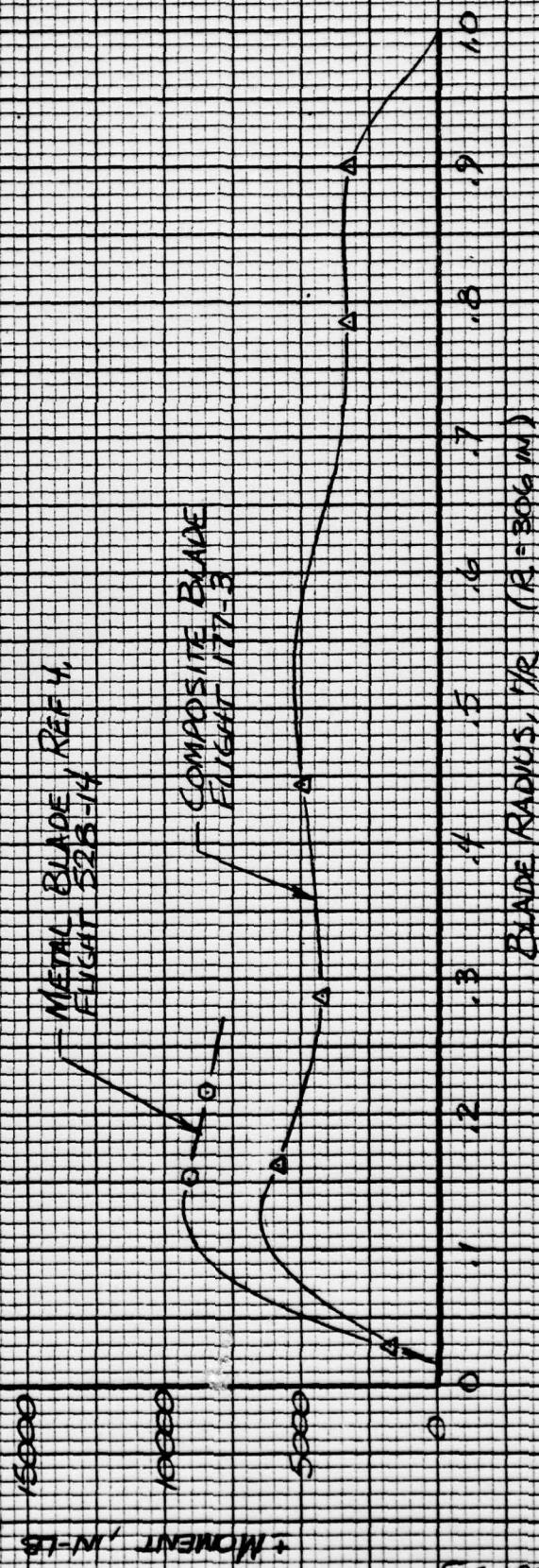
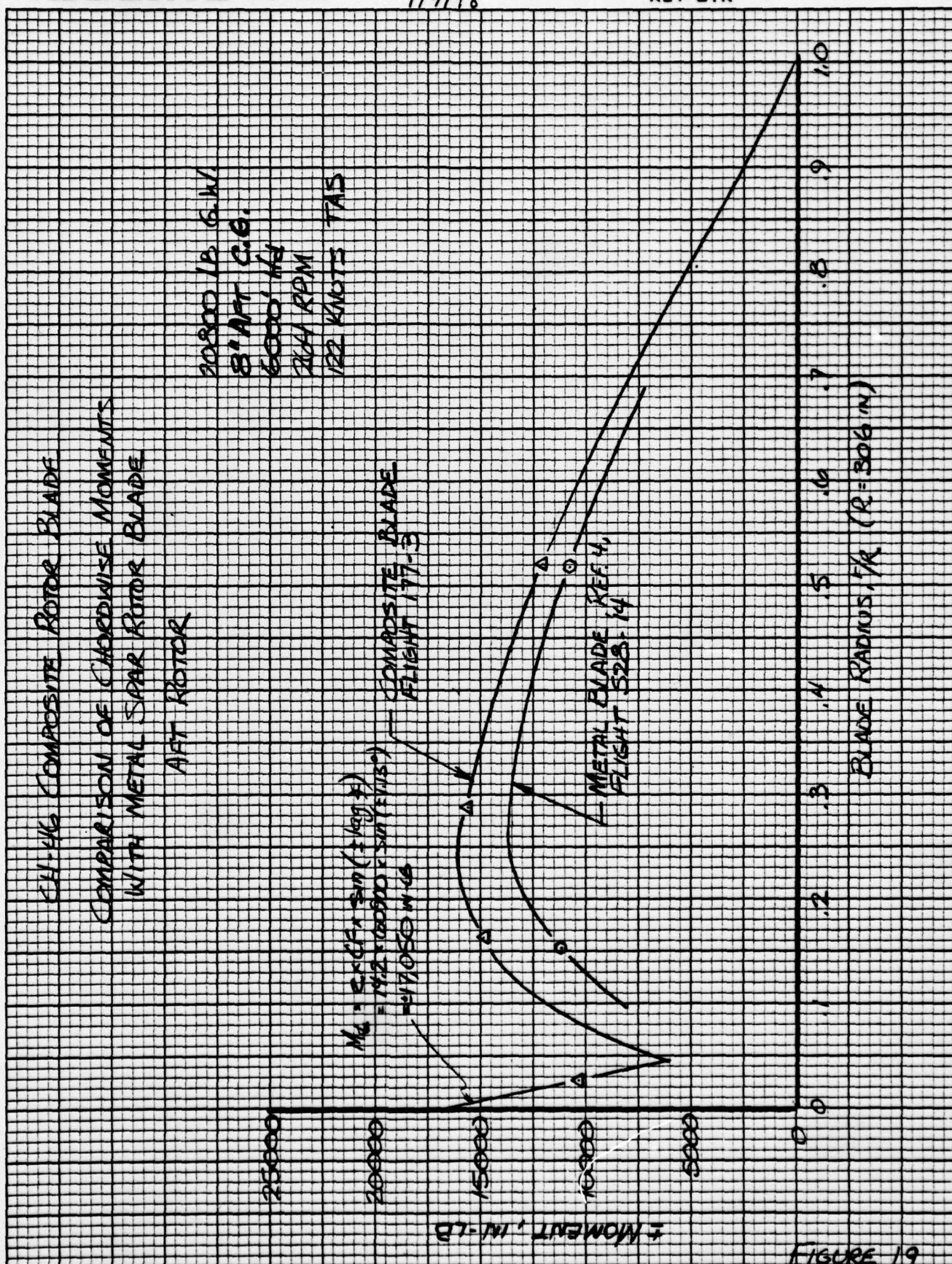
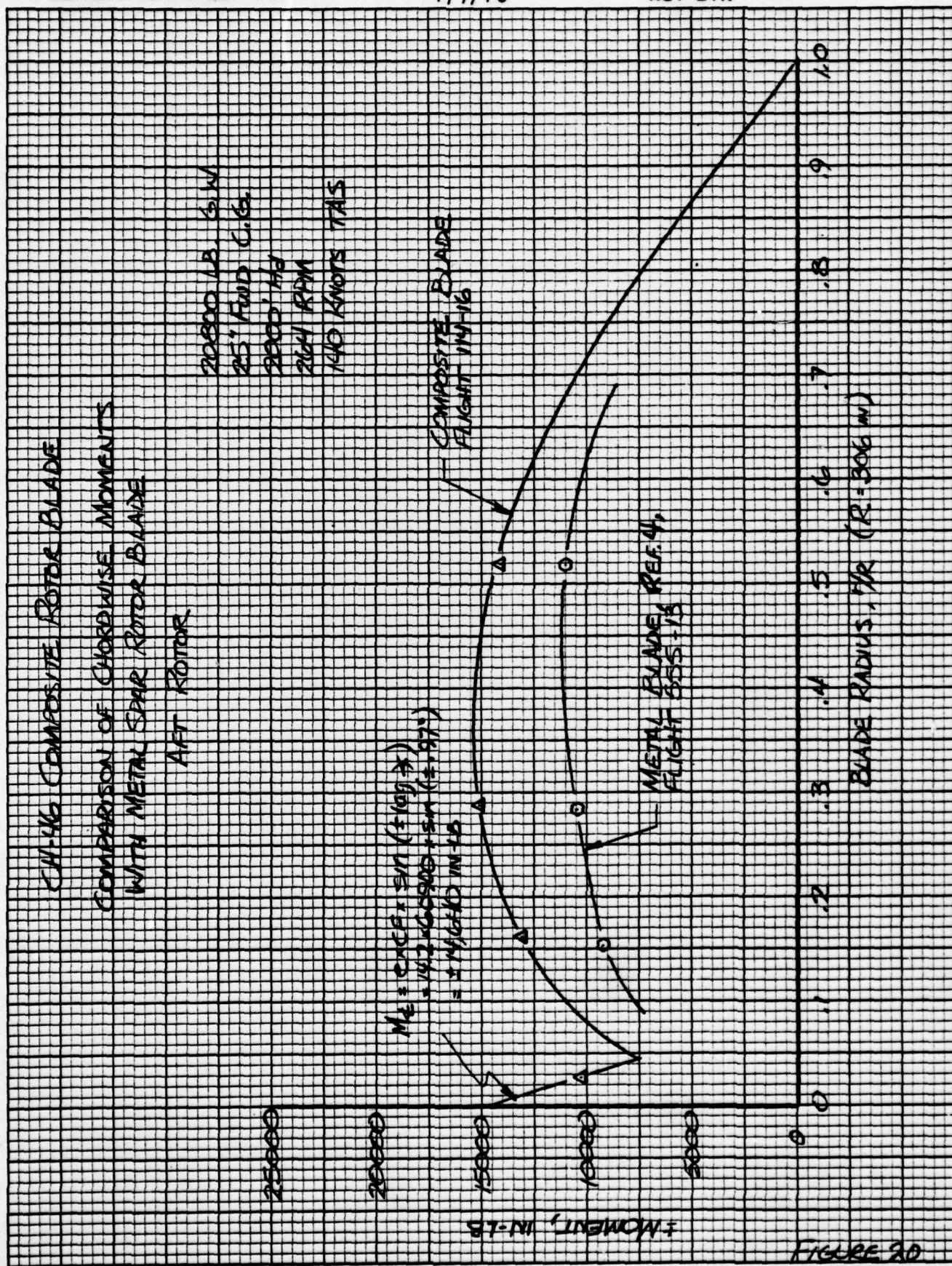
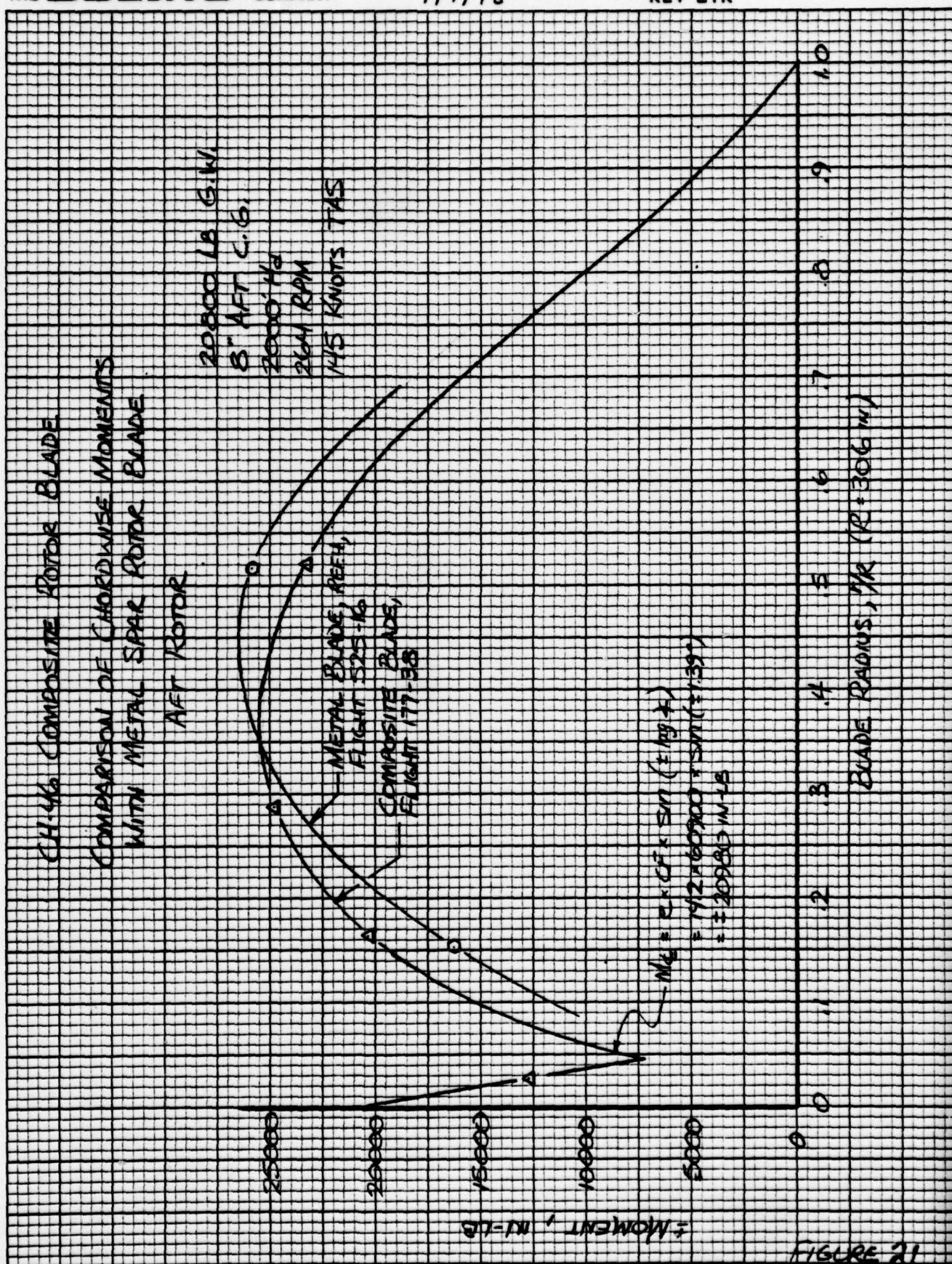


FIGURE 18







THE **BOEING** COMPANY

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DATE: 7/7/78

D210-11168-3  
NUMBER Vol. 1  
REV LTR  
MODEL NO.

APPENDIX A

Flight Log Edit Sheets

PREPARED BY: H. STEINMANN  
 CHECKED BY:  
 DATE: 8-4-77  
 F/T DATE: 8-2-77

DATA REQUEST EDIT TIMES  
 BOEING VERTOL COMPANY  
 A DIVISION OF THE BOEING COMPANY  
 Edited From:  REAR TAPE  
 A/C TAPE

PAGE NO. 1 OF 1  
 REPORT NO.  
 MODEL NO. H-46E/Glass Black  
 F/T No. SLP-1 X 114  
 TOGW 21,500 TCG 32.4°F  
 Fuel 1950#

Event	Start	Stop	Min	Time				Code	Maneuver	Description
				Time	Time	Code	Maneuver			
1	08:51:32	08:51:37	1000				FLAT PITCH (16% C/P)			
2	08:58:00	08:58:05	0231				HOVER (50%, 510)	$H_p = 0$	$\Delta T = 23^\circ C$	
3	08:58:54	08:58:59	3404				LAT. CONTROL REVERSE	- HOVER	$\pm 20\%$ DISPL.	
4	08:59:17	08:59:22	3401				LONG.	" "	$+20\% - 70\%$ DISPL.	
5	08:59:37	08:59:42	3407				DIRECT	" "	$\pm 20\%$ DISPL.	
6	09:00:10	09:00:17	1726				" "	" "	98% to 0 to 38%	
7	09:00:44	09:00:54	1726				" "	" "	43% - 0% - 85% - 52%	
							AIRCRAFT REFUELED	TO 1900# BETWEEN EVENTS	( $\Delta T = 0$ )	
8	09:22:10	09:22:15	0000				STATIC TEST RECORD	$H_p = 0$	$\Delta T = 24^\circ C$	
9	09:23:55	09:24:28	0828				ROTOR ACCELERATION (BREAK RELEASE TO 264 RPM)			
10	09:29:34	09:29:54	2313				TRANSITION (0 - 90 KTS)			
11	09:34:45	09:34:55	0100				LEVEL FLIGHT: 30 KTS CAS	, $2700' H_p$	, $18^\circ C$	
12	09:35:31	09:35:38	0100				" " 60 "	" "	" "	
13	09:37:05	09:37:15	0100				" " 86 "	" "	2600' 18.5	
14	09:38:29	09:38:36	0100				" " 114 "	" "	" "	
15	09:40:00	09:40:20	0100				" " 128 (Cruise)	" "	2300' 20.5 ( $\pm 0.05\%$ TURB)	
16	09:49:52	09:48:02	0100				" " 139. (VH)	" "	2700' 20	
17	09:49:50	09:50:10	3200				FULL POWER DIVE	150 "	" 2600' 21.5	
18	09:51:57	09:52:03	3200				" " 157 "	" "	2000' 22	
19	09:52:11	09:52:25	3220				RECOVERY FROM 157 KTS DIVE	; 1.22 to 1700'	23°C	
20	09:54:52	09:55:21	2616				RIGHT TURN: 82/94 KTS, 30 deg BANK, 1000' RATE	; $H_p/3A = 2700/19$		
21	09:55:37	09:56:00	2615				LEFT TURN: 83/88 " -30 "	" "	2600/19	
22	09:56:37	09:56:53	2615				" " 80/92 " -45/50 "	" " OPER. "	" "	
23	09:57:25	09:57:42	2616				RIGHT TURN 80/93 " 45 "	" "	" "	
24	09:58:22	09:58:38	2615				LEFT TURN 80/94 " -57 "	" ", 1.8%	" "	
25	09:59:06	09:59:25	2616				RIGHT TURN 68/90 " 57 "	" ", 1.75%	" "	

NOTE: FORWARD CYCLES TRIM ACTUATOR SCHEDULE  
 BELIEVED TO BE IN ERROR FOR THIS FLIGHT

FAULTY FG BACK POTENTIOMETER FOUND AT  
 POST-FLIGHT INSPECTION AFTER EXPERIENCING  
 FORWARD ROTOR "DROP STOP CONTACT" IN FLIGHT  
 AT 110 KTS IAS

PREPARED BY:  
CHECKED BY:  
DATE:

DATA REQUEST EDIT TIMES  
BOEING VERTOL COMPANY  
A DIVISION OF THE BOEING COMPANY  
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PAGE NO. 1 OF 2

REPORT NO.

MODEL NO. H-46E Glass Elas.  
FIT No. SLP-1 X 115  
TOGW 21,500 TOCG 22.4°F  
FEB 1951

	START	STOP	MIN					Fuel 1950 <sup>2</sup>
Rec No.	TIME	TIME	CODE	MANEUVER DESCRIPTION				
	HH:MM:SS.S	HH:MM:SS.S						
2	13:46:58	13:47:23	23/3	TRANSITION (0 - 30 Kts @ max AWR)				
1	2 13:47:50	13:47:55	0300	CLIMB, 85 Kts CAS, Hg X, T = 1000' / 24.5°				
3	3 13:48:30	13:48:35	0300	" 82 "	" "	" "	2200' / 21°	
1	4 13:49:04	13:49:09	0300	" 84 "	" "	" "	3000' / 19°	
4	5 13:49:47	13:49:52	0300	" 75 "	" "	" "	4100' / 15°	
5	6 13:50:35	13:50:40	0300	" 73 "	" "	" "	5200' / 14.5°	
6	7 13:51:25	13:51:30	0300	" 81 "	" "	" "	6400' / 12°	
7	13:52:00	13:52:05	0300	THREE NOT ON TAPE	7200' / 12°			NOT ON TAPE
8	9 13:52:45	13:52:50	0300	" 83 "	" "	" "	8300' / 10.5°	
9	10 13:53:25	13:53:30	0300	" 77 "	" "	" "	9200' / 10°	
10	11 13:54:14	13:54:19	0300	" 75 "	" "	" "	10,400' / 8°	
11	12 13:55:10	13:55:15	0300	" 75 "	" "	" "	11,000' / 6°	
12	13 13:56:28	13:56:33	0300	" 73 "	" "	" "	12,000' / 5°	
13	14 13:58:13	13:58:18	0100	LEVEL FLIGHT 69	" "	" "	12,700' / 3°	
14	15 13:59:05	13:59:10	0100	" " 63	" "	" "	12,700' / 2.5°	
15	16 14:02:03	14:02:08	0100	" " 45	" "	" "	13,000' / 1.5°	
16	17 14:03:15	14:03:20	0100	" " 35	" "	" "	13,100' / 1°	
17	18 14:04:02	14:04:07	0100	" " 72	" "	" "	13,100' / 2°	
18	19 14:05:16	14:05:21	0100	" " 77	" "	" "	13,200' / 2°	
19	20 14:07:37	14:08:22	2616	RIGHT TURN 65/22	" "	" "	13,300' / 1°	12° BANK
20	21 14:09:44	14:09:49	0500	PPD 500 ft/m 63	" "	" "	13,100' / 2°	
21	22 14:09:56	14:10:01	0500	" 1000" 63	" "	" "	13,300' / 2°	
22	23 14:10:15	14:10:20	0500	" 1500" 65	" "	" "	12,700' / 2°	
23	24 14:10:30	14:10:45	0520	PPD 1000 ft/m 63	" "	" "	12,300' / 3°	
24	25 14:12:25	14:13:05	2615	LEFT TURN 75	" "	" "	12,500' / 2.5°	15° BANK
25	26 14:14:03	14:15:12	2615	" " 63	" "	" "	12,600' / 2.5°	30° " (LAST TURN)
26	27 14:15:42	14:16:15	2616	RIGHT TURN 63	" "	" "	12,500' / 2.5°	25° "
27	28 14:17:00	14:17:05	0030	LEFT S/S 73	" "	" "	12,500' / 3°	1/2 BALL
28	29 14:17:25	14:17:30	0030	RIGHT S/S 71	" "	" "	12,600' / 3°	1/2 BALL
29	30 14:18:39	14:18:43	3404	LAT CONTR REV. 72	" "	" "	13,000' / 2°	+10/-16% CNT
30	31 14:18:46	14:18:49	3404	" " 75	" "	" "	13,000' / 2°	+10/-16% CNT
31	32 14:19:03	14:19:06	3401	LONG " 72	" "	" "	13,000' / 2°	+17/-10% CNT
32	33 14:19:16	14:19:20	3407	THREE NOT ON TAPE	12,700' / 2°			NOT ON TAPE
33	34 14:21:20	14:21:35	2810	S/P PULL UP 5500D MANEUVER	13,700' / 1.5°			
34	35 14:21:49	14:21:54	2810	" " 60	" "	" "	13,000' / 1.5°	1.20g / 14° CL
35	36 14:21:58	14:22:03	2810	" " 63	" "	" "	13,100' / 1.5°	1.22g / 16.7% CL
36	37 14:22:12	14:22:17	2810	" " 67	" "	" "	13,200' / 1.5°	1.24g / 18.7% CL
37	38 14:23:54	14:24:04	2801	LONG PULLUP 64	" "	" "	13,000' / 1.5°	1.15g / 11.7% LONG
38	39 14:24:20	14:24:29	2801	" " 68	" "	" "	13,300' / 1°	1.15g / 12° LONG
39	40 14:25:00	14:25:10	2801	" " 68	" "	" "	13,300' / 1°	1.19g / 14.7% LONG
40	41 14:31:20	14:31:25	0600	A/R STDY	60	" "	12,100' / 3°	
41	42 14:31:25	14:31:41	2637	A/R L.TURN	69	" "	11,700' / 4°	15° BANK
42	43 14:31:43	14:31:59	2637	A/R R.TURN	72	" "	11,200' / 6°	20° BANK
43	44 14:32:13	14:32:17	3437	A/R LAT CONTR REV.	66	" "	10,100' / 7.5°	+18/-22% LAT
44	45 14:32:22	14:32:26	3437	A/R LONG CONTR REV.	66	" "	9800' / 9.5°	+18/-4% LONG
45	46 14:32:28	14:32:32	3437	A/R DIR. CONTR REV.	67	" "	9600' / 9°	+11/-22% DIR
46	47 14:36:39	14:36:44	0232	OGF HOVER 0	" "	" "	5000' / 4°	====
47	48 14:36:46	14:36:50	3404	LAT CONTR REV. 0	" "	" "	5100' / 4°	+9/-23% LAT
48	49 14:36:52	14:36:55	3404	" " 0	" "	" "	5100' / 4°	+14/-23% LAT
49	50 14:36:57	14:37:00	3401	LONG CONTR REV 0	" "	" "	5100' / 4°	+16/-10% LONG
50	51 14:37:02	14:37:06	3407	DIR CONTR REV 0	" "	" "	5100' / 4°	+23/-12% DIR

PREPARED BY:  
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DATA REQUEST EDIT TIMES  
BOEING VERTOL COMPANY  
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REPORT NO.  
MODEL NO. H-46E/Glass Bla.  
FH No. SLP-1 X 115  
TOGW TOCG

(CONTINUED)

Rec No.	Part No.	START	STOP	MVNR				
		TIME	TIME	CODE	MANEUVER	DESCRIPTION		
36	52	14:38:22	14:38:39	2637	AIR L TURN	75	Kts CAS, Hg/AT = 4500'/15°	48° BANK
1	53	14:38:40	14:38:59	2637	AIR R TURN	60	" " " " 3700'/15°	43° BANK
1	54	14:39:00	14:39:05	0600	AIR STEADY	75	" " " " 3000'/17°	±.1g Turb/1.60°
37	55	14:39:18	14:39:22	3437	AIR LAT CONTR REV	76	" " " " 2200'/19.5°	+17/-23° LAT
1	56	14:39:23	14:39:26	3437	AIR LONG CONTR REV	72	" " " " 2000'/20°	+22/-10% LONG
1	57	14:39:27	14:39:30	3437	AIR DIR CONTR REV	71	" " " " 1900'/20°	+5/-21% Direct
1	58	14:39:45	14:39:51	2837	AIR LONG PULLUP	77	" " " " 1200'/22°	1.45g/3.16% LONG
38	59	14:43:29	14:43:34	2837	AIR C/P PULLUP	71	" " " " 2400'/19°	1.78g/4.28% C/P
39	60	14:46:25	14:46:35	0100	LEVEL FST V/H	138	" " " " 1600'/23.5°	±.1g Turb: 100% C/P
40	61	14:50:00	14:50:22	2200	DECCEL TO HOLD POSITION 1900' (CUTTED)	"	0°/27°	

PREPARED BY:  
CHECKED BY:  
DATE:

DATA REQUEST EDIT TIMES  
BOEING VERTOL COMPANY  
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REPORT NO.  
MODEL NO. H-46E/G/155 Elac  
FLT NO. 5LP-1 X 116  
TOW 21,500 TDCG 22.4°F  
Fuel 1900#

RE L O P N No.	TIME No.	START HH:MM:SS.S	STOP HH:MM:SS.S	MANEUVER CODE	MANEUVER DESCRIPTION		
						BATCH	TIME
2	2	15:38:54	15:39:17	2615	LEFT TURN	44/55 KTS CAS, H/DAT = 2200'	19.5°C
3	3	15:39:31	15:39:52	2616	RIGHT TURN	42/52 "	2200' 19.5
4	4	15:40:55	15:41:15	2615	LEFT TURN	49/55 "	2300' 19.5
5	5	15:42:08	15:42:27	2616	RIGHT TURN	43/69 "	2500' 19.
6	6	15:43:36	15:43:53	2615	LEFT TURN	44/60 "	2800' 20.
7	7	15:44:28	15:44:48	2616	RIGHT TURN	44/63 "	2800' 20.
8	8	15:45:46	15:45:56	2801	LONG PULLUP	82 "	2300' 20.
9	9	15:46:17	15:46:22	2810	S/P PULLUP	83 "	2400' 20.
10		15:48:31	15:49:15	2801	TRIM E. AND T/130N TAPE		1520 (.50)
11	11	15:48:37	15:48:44	2810	S/P PULLUP	126 "	2600' 20.5
12	12	15:49:29	15:49:58	2615	LEFT TURN	110/128 "	2400' 21
13	13	15:50:12	15:50:32	2616	RIGHT TURN	124/130 "	2500' 21
14	14	15:50:57	15:51:14	2615	LEFT TURN	120/127 "	2600' 20.5
15	15	15:51:32	15:51:53	2616	RIGHT TURN	124/128 "	2600' 20.5
16	16	15:52:07	15:52:12	0030	LEFT S/S	126 "	2600' 20.5
17	17	15:52:20	15:52:25	0030	RIGHT S/S	124 "	2700' 20.
18	18	15:54:09	15:54:13	3404	LAT Cont Rev.	126 "	2600' 20.5
19	19	15:54:19	15:54:23	3401	LONG Cont Rev	126 "	+11/-11% LONG
20	20	15:54:26	15:54:30	3401	LONG "	127 "	+11/-18% LONG
21	21	15:54:31	15:54:35	3407	DIRECT "	126 "	+14/-14% PEDAL
22	22	15:55:48	15:55:52	3404	LAT Cont Rev	138 "	+16/-16% LAT
23	23	15:55:56	15:56:00	3401	LONG "	139 "	+14/-10% LONG
24	24	15:56:02	15:56:06	3407	DIRECT "	141 "	+12/-26% PEDAL
25	25	15:57:23	15:57:28	0500	PPD 500 fpm	111 "	2600' 20.
26	26	15:57:34	15:57:39	0500	" 1000 "	114 "	2500' 20.
27	27	15:57:48	15:57:53	0500	" 1500 "	112 "	2200' 21
28	28	15:57:55	15:58:05	0520	" Recovery	112 "	2000' 21.5
29	29	16:00:20	16:00:30	0232	HOVER OGE	0 "	2400' 20.5 NO
30	30	16:03:34	16:03:48	2637	AIR L.TURN	104/126 "	2000' 22, 254/293 30° BANK/1.65 (GND)
31	31	16:06:27	16:06:46	2637	AIR R.TURN	107/133 "	2900' 20, 255/284 30° BANK/1.493
32	32	16:06:51	16:06:54	3437	A/R LAT Cont Rev	128 "	1800' 23, 266 +17/-24% LAT
33	33	16:06:55	16:06:57	3437	AIR LONG "	132 "	1600' 24, 264 +13/-12% LONG
34	34	16:06:58	16:07:01	3437	AIR DIRECT "	132 "	1400' 24.5 267 +5/-19% Direct
35	35	16:09:28	16:09:33	0600	AIR STDY	135 "	2500' 21, 268
36	36	16:09:35	16:09:50	2837	AIR LONG PULLUP	132 "	2200' 22, 253/284 1.90 g (.60g Min)
37	37	16:09:53	16:09:57	2837	AIR CP PULLUP	129 "	1500' 24 262/272 1.79 g
38	38	16:14:20	16:15:16	2200	DECENT/ROLL FROM 1000ft		TAPE TIME N.G.
39	39	16:17:42	16:18:13	2200	" " "	60° (STEEP APPROACH)	
40	40	16:20:10	16:20:27	2200	" " "	82° (SHALLOW APPROACH)	
41	41	16:23:18	16:23:43	2200	" " "	68° (SHALLOW APPROACH)	
42	42	16:25:20	16:25:25	1823	VERT DESCENT TO LANDING		1.14g

PITCH, ROLL ATTITUDE GYRO'S CAGED THIS FLIGHT

PREPARED BY: H. STEINMANN  
CHECKED BY:  
DATE: 3-15-77 (62-7)  
FUT DATE: 3-4-77

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BOEING VERTOL COMPANY  
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**REPORT NO.**

MODEL NO. H-46E/6/255 8122  
FLT NO. SLP-1 X 119  
TOW 25,000 TOCG 13.2 F

PILOT NAME NO.	TIME	TIME	CODE	MANEUVER DESCRIPTION	FUEL = 2300
	START	STOP	MNR		
PILOT NAME NO.	HH:MM:SS.S	HH:MM:SS.S			
1 1	16:28:29	16:28:34	1000	FLAT PITCH (16.7° C/L)	
2 2	16:32:03	16:32:08	0231	HOVER EGE	HP=0 / DAT = 30°C
17 17	16:52:45	16:52:55	1400	JUMP TAKEOFF	1.18g 16g 257 Min, 272 Max.
18 18	16:53:15	16:53:20	0231	HOVER EGE	HP=0 / DAT = 30.5°C
19 19	16:53:47	16:53:43	3404	COLLISION RECOVERY, EASY ON TAPE	+1.1g -1.1g
20 20	16:53:51	16:53:55	3401	LONG CONTR REV - 14.7° C/L	+1.9/-1.1g Long
20 21	16:54:14	16:54:22	1726	HOVER TURN REV - 88% (R) - 20.5° C/L	
21	16:54:34	16:54:43	1726	HOVER TURN REV - 3.5% (L) - 2.5% (R)	NOT ON TAPE
22 23	16:55:50	16:55:59	1115	LEFT TAXI TURN - SLOW	
24	16:56:00	16:56:10	1116	RIGHT TAXI TURN - SLOW	
25	16:56:11	16:56:29	1115	LEFT TAXI TURN - RAPID	
26	16:56:30	16:56:35	1100	STRAIGHT TAXI	
27	16:56:37	16:56:56	1116	RIGHT TAXI TURN - RAPID	
25	17:16:08	17:16:59	1516	RIGHT SIDEWIND F/T - HOVER TO 35 KTS. (PACED)	
29	17:17:00	17:17:12	1520	RECOVERY FROM RT SIDEWIND F/T @ 35 KTS	
26 30	17:22:04	17:22:44	1515	LEFT SIDEWIND F/T - HOVER TO 35 KTS (PACED)	
1 31	17:22:45	17:22:54	1520	RECOVERY FROM LT. SIDEWIND F/T @ 35 KTS	
27 32	17:26:03	17:26:30	1600	REARWARD F/T - X TO 30 KTS (PACED)	
1 33	17:26:31	17:26:39	1620	RECOVERY FROM REARWARD F/T @ 30 KTS	
28 34	17:30:49	17:31:14	2200	FLARE TO HOVER - NORMAL (From 52 KTS)	11° Nose Up
29 35	17:33:05	17:33:25	2200	FLARE TO HOVER - STEEP (From 46 KTS)	11.5° Nose Up
30 36	17:35:10	17:35:30	2200	FLARE TO HOVER - SHALLOW (From 59 KTS)	13° Nose Up
31 37	17:36:13	17:36:17	1823	VERTICAL DESCENT TO LANDING (1.32g)	

PREPARED BY: H. FRIEDMANN  
 CHECKED BY:  
 DATE: 8-16-77  
 FCT DATE 8-5-77

DATA REQUEST EDIT TIMES  
 BOEING VERTOL COMPANY  
 A DIVISION OF THE BOEING COMPANY

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PAGE NO. 10-1

REPORT NO.

MODEL NO. H-46E/Glass Bls  
 FIT NO. SLP-1 X 119  
 TOGW 25,000 TOCG 13.2F

FUEL 2300

PILOT RECD:	BATCH EVT#	START	STOP	MVNR				
No.	No.	TIME	TIME	CODE	MANEUVER	DESCRIPTION		
		HH:MM:SSS	HH:MM:SSS					
1	1	14:27:14	14:27:19	0000	STATIC TEST REC'D		0/32	
2	2	14:36:38	14:36:55	2313	TRANSITION, 0-80 FT			
3	3	14:40:22	14:40:27	0100	LEVEL FLIGHT 81K4 CAS	1700/26		
4	4	14:41:13	14:41:23	0100	TIME MISSING ON 92 A/C TAPE	1800/26		
5	5	14:42:32	14:42:37	0100	" "	102 "	1800/26.5	
6	6	14:43:47	14:43:52	0100	" "	111 "	2100/26	
7	7	14:44:55	14:45:00	0100	" "	122 "(Vne=Vn)	2200/25.5	
8	8	14:47:55	14:48:02	3200	DIVE TO	130 "	1900/26.5	
9	9	14:49:59	14:50:02	0100	LEVEL FLIGHT 92	" "	2000/25.5	
10	10	14:51:11	14:51:16	0100	" "	61 "	2000/25	
11	11	14:52:05	14:52:10	0100	" "	52 "	2000/25	
12	12	14:54:14	14:54:19	0100	" "	44 "	2400/23.5	
13	13	14:55:15	14:55:45	0100	" "	32/40 "	2400/23.5	
15	15	14:59:48	14:59:53	0500	PPD 500 FM	98 "	2000/25.5	
16	16	15:00:05	15:00:10	0500	" 1000	98 "	1700/26	
17	17	15:00:17	15:00:22	0500	" 1500	103 "	1500/27	
18	18	15:00:25	15:00:31	0520	" RECOVERY	104-92 "	1200/27.5	
19	19	15:01:43	15:02:10	2615	LEFT TURN	35/54 "	1900/25	Entry Missed
20	20	15:02:56	15:03:22	2616	RIGHT TURN	37/61 "	2000/25	Entry Missed
21	21	15:03:55	15:04:17	2615	LEFT TURN	43/53 "	2000/25	47° " /1.34
22	22	15:04:57	15:05:10	2616	RIGHT TURN	42/52 "	1900/25	33° " /1.24
23	23	15:06:09	15:06:32	2616	RIGHT TURN	65/75 "	1600/26	33° " /1.24
24	24	15:06:36	15:06:57	2615	LEFT TURN	70/75 "	1500/26.5	36° " /1.26 Noise
25	25	15:07:53	15:08:06	2615	LEFT TURN	61/72 "	1500/26.5	46° " /1.26 Noise
26	26	15:08:28	15:08:49	2616	RIGHT TURN	68/81 "	1400/27	46° " /1.43 Noise
27	27	15:10:48	15:10:49	2801	CYCLIC PULLUP	68 "	1500/26.5	1-27.5
28	28	15:10:52	15:11:02	2801	CYCLIC PULLUP	74 "	1500/26.5	1.32g
29	29	15:11:26	15:11:30	2810	COLL PULLUP	75 "	1500/26.5	1.32g
30	30	15:11:44	15:11:47	2810	COLL PULLUP	72 "	1500/26.5	1.50g
31	31	15:13:24	15:13:47	2615	LEFT TURN	105/112 "	1900/26	Entry Missed
32	32	15:14:11	15:14:43	2616	RIGHT TURN	108/112 "	2000/26	33° " /1.25g Noise
33	33	15:15:10	15:15:32	2616	RIGHT TURN	99/114 "	2000/26	35° " /1.32g Noise
34	34	15:15:54	15:16:19	2615	LEFT TURN	103/112 "	1800/27	37° " /1.32g Noise
35	35	15:16:52	15:16:57	0030	LEFT SIDESLIP	110 "	1800/27	7-9° Sideslip
36	36	15:17:14	15:17:19	0030	RIGHT SIDESLIP	112 "	1900/26.5	10-11° "
37	37	15:18:00	15:18:07	2801	CYCLIC PULLUP	112 "	2000/26	-7-12° Pullup 1.41g
38	38	15:19:01	15:19:06	2810	COLL. PULLUP	111 "	2000/26	1.41g
39	39	15:20:16	15:20:19	2801	COLL. PULLUP	111 "	2000/26	+1-12-71+
40	40	15:20:42	15:20:46	3401	LONG. CONT. REV.	108 "	2000/26	+15/-12.5 Long
41	41	15:20:50	15:20:54	3407	DIRECT CONT. REV.	106 "	2000/26	+15/-19.5 Head
42	42	15:22:35	15:22:39	3404	LAT CONT REV	124 "	2000/27	+13/-12.5 Long
43	43	15:22:41	15:22:45	3401	LONG CONT REV.	123 "	2000/27	+13/-10.5 Long
44	44	15:22:47	15:22:51	3407	DIRECT CONT. REV.	124 "	2000/27	+17/-15.5 Head
45	45	15:22:56	15:23:00	3401	LONG CONT REV.	124 "	2000/27	+14/-11.5 Long
46	46	15:25:33	15:25:38	0600	AIR STAB/DY	104/112 "	2400/25	No 293/287
47	47	15:25:39	15:25:53	2637	AIR L. TURN	102/112 "	2100/25.5	267/281 31° Bank/1.35
48	48	15:25:54	15:26:06	2637	AIR R. TURN	91/108 "	1500/27.5	267/284 40° " /1.40g Noise
49	49	15:29:53	15:29:58	2837	A/R COLL PULLUP	107 "	2100/25.5	267/273 1-23g
50	50	15:30:00	15:30:10	2937	A/R LONG (GND) PULLUP	110 "	1800/26	263/296 1.75g
51	51	15:30:14	15:30:35	0423	SPRAL DESCENT LEFT	75/111 "	1200/26	256/296 45° Bank/1.61g Noise
52	52	15:36:25	15:36:50	2200	FLARE TO HOVER	75-0 "	100/31	Noise

PREPARED BY: H.H. Steinmann  
 CHECKED BY:  
 DATE: 8-17-77  
 FLT DATE: 8-8-77

DATA REQUEST EDIT TIMES  
 BOEING VERTOL COMPANY  
 A DIVISION OF THE BOEING COMPANY  
 Edited From:  Real Time  
 A/C TAPE

PAGE NO. 1 OF 2  
 REPORT NO.

MODEL NO. H-46E/Glass Black  
 Flt No. SLP-1 X 121  
 TOW 25,000 TOCG 13.2°F  
 Fuel 2300#

Pilot No.	BATCH No.	START HH:MM:SS	STOP HH:MM:SS	MNR	TIME	CODE	MANEUVER	DESCRIPTION	F12 1000 TAS	110/300	
1	1	10:12:20	10:12:25	0000			STATIC TEST RECON				
2	2	10:24:15	10:24:50	0231			HOVER ICE				
3	3	10:27:55	10:28:15	2313			TRANSITION (0-80)				
4	4	10:29:25	10:29:38				? (PROBABLY INITIAL CLIMB)				
5	5	10:30:00	10:30:05	0300			CLIMB, MAX PERF	70 KTS	2000/-		
6	6	10:30:48	10:30:53	0300			" "	" "	3000/-		
7	7	10:31:55	10:32:00	0300			" "	" "	4000/18.6		
8	8	10:32:47	10:32:52	0300			" "	" "	5000/15.8		
9	9	10:33:57	10:34:02	0300			" "	" "	6000/14.9		
10	10	10:36:20	10:36:23	0100			LEVEL FLIGHT	70 "	6800/12.8 (8Kft)		AIR. TRIM (Error)
11	11	10:37:15	10:37:20	0500			SLIGH-DESCENT (350 ft)	70 "	"	3000/-, 2000/-	" "
12	12	10:38:47	10:38:50	0100			LEVEL FLIGHT	80 "	"		MAX. FLIGHT
13	13	10:40:10	10:40:30	0100			" "	90 "	"		"
14	14	10:41:49	10:41:55	0100			" "	95 "	"		"
15	15	10:43:25	10:43:40	0100			" "	70 "	"		"
16	16	10:44:20	10:44:25	0100			" "	60 "	"		"
17	17	10:45:20	10:45:50	0100			" "	50 "	"		"
18	18	10:46:55	10:47:00	0100			" "	38 "	"		
19	19	10:58:00	10:58:35	2616			RIGHT TURN	81 "	"		16° BANK/1.02g
20	20	10:58:47	10:59:20	2615			LEFT TURN	81 "	"		31° BANK/1.30g
21	21	10:59:45	10:59:49	3404			LAT CONT REV	82 "	"		+15/-20° LAT
22	22	10:59:54	10:59:58	3401			LONG CONT REV	82 "	"		+10/-14° LONG
23	23	11:00:00	11:00:04	3407			DIRECT CONT REV	82 "	"		+14/-18° DIREC
24	24	11:00:27	11:00:35	2801			CYCLIC PICKUP	81 "	"		1.28g
25	25	11:02:20	11:02:25	2810			COLL. PICKUP	81 "	"		1.32g
26	26	11:02:37	11:02:42	2810			COLL. PICKUP	81 "	"		1.32g
27	27	11:03:18	11:03:40	0100			LEVEL FLT 0°NFT ON A/C81 TAPE	"	"		
28	28	11:03:20	11:03:25	0030			LEFT SIDE L113 (10°)	81 "	"		
29	29	11:03:35	11:03:40	0030			RIGHT SIDE L113 (13°)	81 "	"		
30	30	11:05:21	11:05:25	3404			LAT. CONT. REV	90 "	"		+15/-20° LAT
31	31	11:05:29	11:05:33	3401			LONG CONT. REV	90 "	"		+19/-15° LONG
32	32	11:05:35	11:05:39	3407			DIRECT CONT REV	90 "	"		+12/-20° PEDAL
33	33	11:07:03	11:07:40	2615			LEFT TURN	54 "	"		40° BANK/1.22g
34	34	11:07:45	11:08:24	2616			RIGHT TURN	54 "	"		40° BANK/1.27g NOISE
35	35	11:09:14	11:09:24	2801			CYCLIC PICKUP	54 "	"		1.15g
36	36	11:09:47	11:09:52	2810			COLL. PICKUP	54 "	"		1.28g
37	37	11:10:03	11:10:07	2810			COLL. PICKUP	54 "	"		1.32g
38	38	11:11:10	11:11:15	0500			PPD 500 ft	72 "	"		
39	39	11:11:28	11:11:33	0500			" 1000 "	72 "	"		
40	40	11:11:42	11:11:47	0500			" 1500 "	72 "	"		
41	41	11:11:48	11:11:55	0520			PPD RECOVERY	72 "	"		1.16g
42	42	11:14:49	11:15:04	2637			A/R L. TURN	70 "	"		42° BANK/1.31g NOISE
43	43	11:15:05	11:15:27	2637			A/R R. TURN	70 "	"		40° " /1.35g NOISE
44	44	11:15:30	11:15:41	2837			AIR CYCLIC PICKUP	70 "	"		1.60g
45	45	11:15:43	11:15:48	0600			A/R STEADY	70 "	"		
46	46	11:15:49	11:15:54	2837			A/R COLL. PICKUP	70 "	"		1.57g
47	47	11:20:12	11:20:34	2637			A/R L. TURN	81 "	"		33° BANK/1.24g NOISE
48	48	11:20:35	11:20:55	2637			A/R R. TURN	81 "	"		27° " /1.25g NOISE
49	49	11:20:57	11:21:05	2837			AIR CYCLIC PICKUP	81 "	"		1.44g
50	50	11:21:09	11:21:14	2837			AIR COLL. PICKUP	81 "	"		1.63g NOISE
51	51	11:23:19	11:23:34	2637			A/R L. TURN	70 "	"		60° BANK/1.34g NOISE

PREPARED BY: H. Steinmann  
CHECKED BY:  
DATE: 8-17-77  
FILE DATE 8-8-77

DATA REQUEST EDIT TIMES  
BOEING VERTOL COMPANY  
A DIVISION OF THE BOEING COMPANY

PAGE NO. 2 OF 2

**REPORT NO.**

MODEL NO. H-46E/Glass Blade  
FL# No. 5LP-1 X 121  
TOW 25000 TOW 13.2 F  
TOW 25000 TOW 13.2 F

Pilot Rank	NAME	START TIME	STOP TIME	MNVR CODE	MANEUVER DESCRIPTION	FUEL LEVEL AT 5 KTS	FUEL LEVEL AT 10 KTS	FUEL LEVEL AT 15 KTS
No.	No.	HH:MM:SS	HH:MM:SS					
32	52	11:23:35	11:23:49	2637	A/R R. TURN	70		58° BANK
33	53	11:23:50	11:23:58	2837	A/R Cyclic Pullup	70		58° BANK
34	54	11:24:01	11:24:05	2837	A/R Cyclic Pullup	70		58° BANK
35	55	11:26:26	11:26:31	0100	LEVEL FLIGHT - NOT ON 70 A/C	2500/22	TAPE	58° BANK
36	56	11:27:28	11:27:33	0100	" "	NOT ON 80 A/C	" TAPE	58° BANK
37	57	11:28:01	11:28:06	0100	" "	90	"	58° BANK
38	58	11:28:53	11:28:58	0100	" "	NOT ON 100 A/C	TAPE	58° BANK
39	59	11:29:27	11:29:32	0100	" "	110	"	58° BANK
40	60	11:30:46	11:30:51	0100	" "	NOT ON 120 A/C	TAPE	58° BANK
41	61	11:31:27	11:31:32	0100	" "	(VH)	129	58° BANK
42	62	11:32:10	11:32:15	0100	" "	(VH)	131	58° BANK
43	63	11:33:20	11:33:57	0423	SPIRAL DESCENT-LEFT	70		67° BANK
44	64	11:39:20	11:39:50	2200	FLARE TO HOVER	80-0		61° BANK

PREPARED BY: H. STEINMANN  
 CHECKED BY:  
 DATE: 8-26-77  
 F/T DATE 8-9-77

DATA REQUEST EDIT TIMES  
 BOEING VERTOL COMPANY  
 A DIVISION OF THE BOEING COMPANY  
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 REPORT NO.

MODEL NO. H-46E/G/255 B12C  
 F/T NO. SLP-1 X 122  
 TOW 2,500 TOCG 9.7%  
 FUEL 2300#

PILOT Record	Event	TIME	TIME	CODE	MANEUVER	DESCRIPTION	Fuel
No.	No.	HH:MM:SS	HH:MM:SS				
1	1	15:44:46	15:44:51	0000	STATIC	TEST	
11	2	16:12:49	16:12:54	1515	LT. SIDEW	LD FT 10 kts	
1	3	16:12:53	16:13:12	1905	ACCEL	10-20 kts LT.	
4	4	16:13:13	16:13:18	1515	LT SIDEW	LD FT 20 kts	
5	5	16:13:19	16:13:27	1905	ACCEL	20-30 kts LT.	
6	6	16:13:23	16:13:33	1515	LT. SIDEW	LD FT 30 kts	
7	7	16:13:34	16:13:42	1905	ACCEL	30-35 kts	
8	8	16:13:43	16:13:48	1515	LT. SIDEWARD	FT 35 kts	
9	9	16:13:50	16:14:20	1520	RECOVERY	35 kts LT SIDEWARD FT TO HOVER	
12	10	16:15:10	16:15:15	1516	RT. SIDEWARD	FT 10 kts	
11	11	16:15:16	16:15:24	1906	ACCEL	10-20 kts	
12	12	16:15:25	16:15:30	1516	RT. SIDEWARD	FT 20 kts	
13	13	16:15:31	16:15:38	1906	ACCEL	20-30 kts	
14	14	16:15:39	16:15:44	1516	RT. SIDEWARD	FT 30 kts	
15	15	16:15:45	16:15:51	1906	ACCEL	30-35 kts	
16	16	16:15:52	16:15:57	1516	RT. SIDEWARD	FT 35 kts	
17	17	16:15:58	16:16:10	1520	RECOVERY	35 kts RT. SIDEWARD FT TO Hover	
13	18	16:17:03	16:17:07	1600	REARWARD	FT 10 kts	
19	19	16:17:08	16:17:15	1921	DECCEL	10-20 kts REARWARD	
20	20	16:17:16	16:17:21	1600	REARWARD	FT 20 kts	
21	21	16:17:22	16:17:30	1921	DECCEL	20-30 kts REARWARD	
22	22	16:17:31	16:17:36	1600	REARWARD	FT 30 kts	
23	23	16:17:38	16:17:47	1920	RECOVERY	30 kts REARWARD TO Hover	
14	24	16:19:30	16:20:10	1923	RAPID ACCEL	Hover TO 130 kts	
15	25	16:21:03	16:21:47	2200	FLARE TO Hover	- NORMAL	NOISE
16	26	16:23:05	16:23:45	2200	"	" - STEEP	NOISE
17	27	16:26:50	16:27:17	2200	"	" - SHALLOW	NOISE
18	28	16:32:22	16:32:55	1813	"	RUNNING LANDING - SHALLOW	NOISE
19	29	16:33:42	16:33:47	1823	VERTICAL DESCENT	TO LANDING	1.43
20	30	16:34:17	16:34:22	1400	JUMP TAKEOFF		1.12
21	31	16:34:49	16:34:54	0231	HOVER	IGE	
22	32	16:35:19	16:35:46	1715	LEFT SPOT TURN	IGE	
23	33	16:35:57	16:36:17	1716	RIGHT SPOT TURN	IGE	
24	34	16:36:46	16:36:50	3404	LAT CON + REVERSAL	- Hover IGE	+23/-27% LAT
1	35	16:36:54	16:36:57	3404	" "	" "	+23/-27% LAT
25	36	16:37:09	16:37:13	3401	LONG	" "	+24/-16% LONG
1	37	16:37:14	16:37:18	3401	" "	" "	+25/-27% LONG
26	38	16:37:44	16:37:52	1726	R-L TURN REVERSAL	- HOVER - 85% 69%	
1	39	16:37:54	16:38:01	1726	L-R TURN REVERSAL	- " 77/100% 70%	
27	40	16:39:30	16:39:35	1122	TAXI STRAIGHT	- SLOW	
1	41	16:39:36	16:39:50	1115	LT TAXI TURN	- SLOW	
1	42	16:39:51	16:40:20	1116	RT TAXI TURN	- SLOW	
28	43	16:41:31	16:41:36	1123	TAXI STRAIGHT	- RAPID	
1	44	16:41:37	16:41:52	1116	RT TAXI TURN	- RAPID	
1	45	16:41:53	16:42:19	1115	LT TAXI TURN	- RAPID	

All even & turns  
 US programmed

PREPARED BY: H. STEINKRUG, ANN  
 CHECKED BY:  
 DATE: 8-18-77  
 FOR DATE 8-11-77

DATA REQUEST EDIT TIMES  
 BOEING VERTOL COMPANY  
 A DIVISION OF THE BOEING COMPANY

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REPORT NO.

MODEL NO. H-46E/Glass Black  
 Flt No. SLP-1 X 124  
 TOW 21,500 TOCG 9.7A

Fuel 2300

Pilot Records	Batch Event	START	STOP	MVNR					
		TIME	TIME	CODE	MANEUVER	DESCRIPTION	Pilot IAS	Hp/Rate	
	No.	HH:MM:SS	HH:MM:SS						
1	—	10:42:00	10:42:04	0000	STATIC	TEST RECORD	NOT	PROCESSED	2
2	2	10:51:48	10:52:01	2313	TRANSITION		0-80		
3	3	10:53:25	10:53:30	0300	CLIMB	Max Pow	70	2000/21.6	
4	4	10:53:55	10:54:00	0300	"	"	70	3000/20.2	
5	5	10:54:35	10:54:40	0300	"	"	70	4000/18.4	
6	6	10:55:10	10:55:15	0300	"	"	70	5000/16.9	
7	7	10:55:54	10:55:59	0300	"	"	70	6000/-	
8	8	10:56:40	10:56:45	0300	"	"	65	7000/13.0	
9	9	10:57:34	10:57:39	0300	"	"	65	8000/11.8	
10	10	10:58:30	10:58:35	0300	"	"	60	9000/10.8	1000 fpm
11	11	10:59:40	10:59:45	0300	"	"	60	10000/8.5	900 "
12	12	11:00:43	11:00:48	0300	"	"	60	11000/7.2	800 "
13	13	11:01:59	11:02:04	0300	"	"	60	12,000/6.4	600 "
14	14	11:02:55	11:03:35	0300	"	"	60	12,600/3.0	—
15	15	11:04:22	11:04:27	0100	LEVEL FLT		54	"	Man Fly Thr
16	16	11:05:08	11:05:13	0100	"	"	60	"	
17	17	11:06:15	11:06:22	0100	"	"	68	"	
18	18	11:07:35	11:07:41	0100	"	"	75	"	
19	19	11:08:55	11:09:35	2616	RIGHT TURN		61	"	15° Mil. Rate
20	20	11:10:05	11:10:29	2615	LEFT TURN		61	"	15° "
21	21	11:11:40	11:11:45	0100	LEVEL FIGHT		41	"	
22	22	11:13:54	11:13:59	0100	"	"	27	"	
23	23	11:16:10	11:16:37	2616	RIGHT TURN		54	"	20° Mil. Rate
24	24	11:16:53	11:17:27	2615	LEFT TURN		54	"	20° "
25	25	11:18:13	11:19:10	3404	LAT. CONT. REV.		60	"	
26	26	11:18:19	11:18:24	3401	LONG. CONT. REV.		60	"	
27	27	11:18:25	11:18:30	3407	DIRECT CONT. REV.		60	"	
28	28	11:18:55	11:19:00	0030	10° LEFT SIDE SLIP		61	"	
29	29	11:19:10	11:19:15	0030	10° RIGHT SIDE SLIP		61	"	
30	30	11:19:37	11:19:50	2801	Cyclic Pullup		61	"	1.12
31	31	11:20:10	11:20:14	2810	Col. Pullup		61	"	1.29
32	32	11:20:19	11:20:24	2810	"	"	61	"	1.32
33	33	11:21:52	11:21:57	0500	PPD 500 fpm		54		
34	34	11:22:05	11:22:10	0500	" 1000 "		54		
35	35	11:22:16	11:22:21	0500	" 1500 "		54		
36	36	11:22:27	11:22:37	0520	" RECOVERY		54		
37	37	11:24:08	11:24:13	0600	A/R STAB		60		
38	38	11:24:14	11:24:30	2637	A/R RIGHT TURN		60		1 Nose Up
39	39	11:24:33	11:24:55	2637	A/R LEFT TURN		60		1 Nose Down
40	40	11:24:57	11:25:02	3437	A/R LAT CONT REV		60		
41	41	11:25:06	11:25:08	3437	A/R LONG CONT REV		60		
42	42	11:25:09	11:25:14	3437	A/R DIRECT CONT REV		60		
43	43	11:29:04	11:29:09	0100	LEVEL FIGHT		75	4900/16.8	Auto Trim
44	44	11:31:05	11:31:12	0100	" "		100	"	
45	45	11:32:03	11:32:09	0100	" "		110	"	
46	46	11:32:48	11:32:56	0100	" "		115	"	
47	47	11:33:21	11:33:28	0100	" "		120	"	
48	48	11:34:08	11:34:08	0100	" "	VME Vne	125	"	
49	49	11:34:36	11:34:43	3200	FULL POWER DIVE		130	"	
50	50	11:35:01	11:35:13	3200	FULL POWER DIVE		135	"	700 fpm Descent
51	51	11:35:25	11:35:31	3200	" "	"	139	"	

PREPARED BY: HHS/Office of the Secretary  
CHECKED BY:  
DATE: 8-12-77  
FCC Docket 8-11-77

DATA REQUEST EDIT TIMES  
BOEING VERTOL COMPANY  
A DIVISION OF THE BOEING COMPANY

PAGE NO. 2 OF 2

**REPORT NO.**

MODEL NO. H-46E Glass Bla  
FLT NO. SLP-1 X 124  
TOGW 21,500 TOCG 3.74

PILOT RECORD	P/N#	START	STOP	M/N/V/R					
		TIME	TIME	CODE	MANEUVER	DESCRIPTION	PILOT ID#S	14/9AT	
No.	No.	HH:MM:SS.S	HH:MM:SS.S						
40	52	11:36:53	11:38:58	0100	LEVEL FLIGHT	50	4900/16.3	AUTO TRIM	
41	53	11:39:02	11:38:07	0100	"	25	"		
42	54	11:39:09	11:39:09	0232	HOVER 066	0	"		
43	55	11:39:37	11:39:41	3404	LAT CONT. REV. - HOVER	0	"		
	56	11:39:45	11:39:49	3401	LONG. CONT. REV - HOVER	0	"		
	57	11:39:52	11:39:55	3407	DIRECT CONT. REV - HOVER	0	"		
44	58	11:42:30	11:42:54	0100	LEVEL FLIGHT	25	"	NR 94%	
45	59	11:43:25	11:43:32	0100	"	50	"	"	
46	60	11:44:02	11:44:09	0100	"	75	"	"	
47	61	11:45:08	11:45:19	0100	"	95	"		AFT DSP
48	62	11:46:19	11:46:25	0100	"	95	"		MANU. FWD TRIM
49	63	11:47:26	11:47:32	0100	"	125	"		130% NR/14
50	64	11:48:21	11:49:27	0100	"	75	"		FWD - TAXI TRIM
51	65	11:50:06	11:50:13	0100	"	70	"	"	"
52	66	11:50:44	11:50:51	0100	"	100	"	"	"
53	67	11:51:11	11:51:18	0100	"	110	"	"	"
54	68	11:51:48	11:51:44	0100	"	115	"	"	"
55	69	11:52:00	11:52:16	0100	"	120	"	"	"
56	70	11:52:44	11:52:52	0100	"	125	"	"	"
57	71	11:57:40	11:57:44	0600	A/R STEADY	70			AUTO TRIM
	72	11:57:45	11:57:57	2637	A/R RIGHT TURN	MISSING 3 MANEUVER (ED. + CIRCLES)			N.G. Noise
73	11:58:00	11:58:20	2637	A/R LEFT TURN	70	45° BANK		N.G. Noise	
74	11:58:25	11:58:29	3437	A/R LAT CONT REV	70				
75	11:58:30	11:58:34	3437	A/R LONG CONT REV	70				
76	11:58:35	11:58:39	3437	A/R DIRECT CONT REV	70				
77	11:58:44	11:58:52	2837	A/R CYCLIC PULLUP	70		1.82	1 Noise Spike	
78	11:58:56	11:59:01	2837	A/R CYCLIC PULLUP	70				
79	11:59:10	11:59:29	0423	SPIRAL DESCENT	70			N.G. Noise	
80	12:06:55	12:07:25	2200	FLARE TO HOVER	80-0				

PREPARED BY: H. STEINMANN  
 CHECKED BY:  
 DATE: 8-18-77  
 F/T DATE 8-11-77

DATA REQUEST Edit Trials  
 BOEING VERTOL COMPANY  
 A DIVISION OF THE BOEING COMPANY  
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 REPORT NO.  
 MODEL NO. H-46E/Glass Black  
 F/T No. SLP-1 X 126  
 TOW 21,500 TOCG 7.7 A  
 FUEL 2300#

Pilot Record Event	BATCH	START	STOP	MANUVR	Pilot IAS	Nominal HD	Fuel 2300#
	TIME	TIME	CODE	MANEUVER DESCRIPTION			
No.	No.	HH:MM:SS	HH:MM:SS				
1	1	15:10:13	15:10:18	0000	STATIC TEST REPO		
2	2	15:18:50	15:19:14	2313	TRANSITION	0-60	
3	3	15:29:16	15:29:19	0232	HOVER 0.6E	0	3500
4	4	15:29:20	15:29:23	3404	LAT CONT REV. -	0	
5	5	15:29:24	15:29:28	3404	" "	0	
6	6	15:29:29	15:29:33	3401	LONG "	0	
7	7	15:29:34	15:29:38	3407	DIRECT "	0	
8	8	15:30:45	15:30:50	0100	LEVEL FLIGHT	27	
9	9	15:31:35	15:31:40	0100	" "	55	
10	10	15:32:28	15:32:33	0100	" "	82	
11	11	15:33:11	15:33:16	0100	" "	110	
12	12	15:41:41	15:41:46	0100	" "	121	
13	13	15:43:05	15:43:10	0100	" "	134	LT D.S.C.
14	14	15:43:58	15:44:03	2600	FULL PULL DOWN Vne	137	LT D.S.C.
15	15	15:45:48	15:45:53	2600	" "	145	DSC
16	16	15:46:23	15:46:28	2600	" "	151	DSC
17	17	15:47:38	15:48:13	2616	RT TURN 30°	41	Poor A/S Control NOISE
18	18	15:48:50	15:49:10	2615	LT "	41	NOISE
19	19	15:49:24	15:49:41	2616	RT "	41	NOISE
20	20	15:50:00	15:50:20	2615	LT "	45°	NOISE
21	21	15:50:35	15:50:50	2616	RT "	41	NOISE
22	22	15:51:43	15:51:50	2801	CYCLIC PULLUP 1.5g	82	-NOISE
23	23	15:52:12	15:52:17	2810	COLL. PULLUP 1.35g	82	
24	24	15:52:19	15:52:22	2810	" "	1.5g	82
25	25	15:52:58	15:53:06	2615	LT TURN 30°	82	1 Spike
26	26	15:53:07	15:53:22	2616	RT TURN 30°	82	
27	27	15:54:26	15:54:37	2615	LT "	45°	NOISE
28	28	15:54:38	15:54:49	2616	RT "	82	NOISE
29	29	15:55:02	15:55:14	2615	LT "	60°	NOISE
30	30	15:55:15	15:55:27	2616	RT "	60°	NOISE
31	31	15:56:45	15:56:49	3404	LAT CONT REV.	121	
32	32	15:56:50	15:56:54	3404	" "	121	
33	33	15:56:55	15:56:59	3401	LONG "	121	
34	34	15:57:00	15:57:03	3407	DIRECT "	121	
35	35	15:57:32	15:57:42	2801	CYCLIC PULLUP	123	NOISE
36	36	16:09:35	16:10:19	1813	DECER TO ROLL-ON LANDING		1 Spike

OK  
 11: Turn 10°  
 Reg

PREPARED BY: H. STEINMANN  
CHECKED BY:  
DATE: 8-31-77  
FCT DATE: 8-15-77

*DATA REQUEST EDIT TIMES*  
**BOEING VERTOL COMPANY**  
A DIVISION OF THE BOEING COMPANY

Edited From:  ~~Real Time~~  
 A/C TAPE

PAGE NO. 10E1

REPORT NO.

REPORT NO. 1  
MODEL NO. H-46E/G1255 Elance  
FIT No. SLP-1 X 127  
TOGW 21,500 TOCG 7.7 A

BATT		START	STOP	MVVR				Fuel 236	
Pilot Request	Wing	TIME	TIME	CODE	MANEUVER DESCRIPTION				
No.	No.	HH:MM:SSS	HH:MM:SSS					PILOT IAS	
1	1	15:27:50	15:27:53	0000	STATIC	TEST			
2	2	15:40:43	15:40:48	0100	LEVEL FLIGHT		75KTS		6KMS
3	3	15:41:38	15:41:43	0199	" "		90	RETRACTED TRIM	"
4	4	15:42:32	15:42:39	0199	" "		100	" "	200 "
5	5	15:43:58	15:44:02	0100	" "		113	"Auto Trim	200 "
6	6	15:44:23	15:44:38	0100	" "		"	" "	" "
7	7	15:45:21	15:45:24	0500	PPD 500 fpm		100		"
8	8	15:45:33	15:45:38	0500	" 1000 "		"		
9	9	15:45:50	15:45:55	0500	" 1500 "		"		
8	10	15:49:25	15:49:35	0125	LEVEL FET		122	SIMULATED TURB 2.2g	2KMS
9	11	15:50:59	15:51:05	2801	CYCIC PULLUP 1.35g		123	WINGS AGOAT	"
10	12	16:07:00	16:07:26	2200	APPROACH TO HOVER		NOT ON	A/C TAPE	

PREPARED BY: H. STEINMAN, M.D.  
CHECKED BY:  
DATE: 9-8-77  
FCT DATE 8-18-77

Dear Request Edit Times

**BOEING VERTOL COMPANY**  
A DIVISION OF THE BOEING COMPANY

A DIVISION OF THE BOEING COMPANY

SEARCHED BY  
DATE: 9-8-71

DATE: 7-6-14

FILE DATE 8-1

TURKISH 510-71

Edited From:  ~~Actual~~  A/C TANE

PAGE NO. 1 OF 1

REFUGEE NO.

M2REL-NR: 11-445/Class 8124

FIGURE NO. 54 P-1 X 128

1964 21700 7389 9.81

Enz 2388

BNU		START	STOP	MIN						FUEL 2300
Pilot Record	Run	TIME	TIME	CODE	MANEUVER	DESCRIPTION	Pilot IAS	Nominal 1h	Cyclic Time	
No.	No.	HH:MM:SS	HH:MM:SS							
1	1	17:46:29	17:46:32	0000	STATIC TEST RECORD					
2	2	18:09:57	18:10:02	0100	LEVEL FLIGHT		87	2000'	Auto	
4	4	18:13:07	18:13:12	0100	"	"	116			
5	5	18:14:27	18:14:32	0100	"	"	128			
6	6	18:15:30	18:15:43	3334	GUST SIMULATION		130			
7	7	18:17:09	18:17:14	0100	LEVEL FLT. VM		135			Ball Slight Right
8	8	18:18:22	18:18:27	0100	"	"	137	-		Ball Centered (18:15:15)
9	9	18:19:07	18:19:30	3334	GUST SIMULATION		136	"	"	"
10	10	18:20:20	18:20:32	3200	FULL PWR DIVE		146			↓
11	11	18:22:39	18:22:44	0113	LEVEL FLIGHT VM		138			MANUAL FWD
12	12	18:23:14	18:23:36	3334	GUST SIMULATION		138	↓	↓	
13	13	18:38:57	18:39:04	0100	LEVEL FLIGHT		130	2.	AUTO	
14	14	18:43:32	18:43:52	0100	"	"	140	2.	↓	

ot

PREPARED BY: H. STEINMANN

CHECKED BY:

DATE: 9-6-77

FLT DATE 8-29-77

## DATA REQUEST EDIT TIMES

BOEING VERTOL COMPANY  
A DIVISION OF THE BOEING COMPANYEDITED FROM:  REAR TIGER  A/C TAPE

PAGE NO. 1 OF 1

REPORT NO.

MODEL NO. H-46E/Glass Black

F/H No. SLP-1 X 136

TOW 21,500 TDCG 9.7A

Fuel 2300

Pilot Record	Batch	START	STOP	MVNR						
		TIME	TIME	CODE	MANEUVER	DESCRIPTION	Pilot IAS	NOMINAL HD	CYCLIC Tran Fwd/Rev	
No.	No.	HH:MM:SS	HH:MM:SS							
1	1	10:40:27	10:40:32	0100	LEVEL FLIGHT		80	2000	-2.5/-2.5	
2	2	10:44:38	10:44:43	0100	"	"	100		-1.1/-1.	
3	3	10:46:38	10:46:43	0100	"	"	110		-2.5/-2.5	
4	4	10:48:36	10:48:41	0100	"	"	120		.6/.6	
5	5	10:50:26	10:50:31	0100	"	"	130		1.5/1.5	
6	6	10:52:38	10:52:52	3334	GUST SIMULATION		130		.82/1.28	
7	7	11:19:26	11:19:31	0100	LEVEL FLIGHT VH		136			
8	8	11:20:17	11:20:41	3334	GUST SIMULATION VH		136		.87/1.25	
10	9	11:23:20	11:23:25	0100	LEVEL FLIGHT		130		1.5/1.5	
1	10	11:23:33	11:23:40	0113	"	"	130		1.5/2.7	
11	11	11:27:01	11:27:06	0113	"	"	58		-2.5/0	
12	12	11:29:24	11:29:29	0113	"	"	58		-2.5/-1.	
13	13	11:31:20	11:31:25	0113	"	"	58		-2.5/-2.	
14	14	11:32:52	11:32:57	0100	"	"	58		-2.5/-2.5	
15	15	11:35:25	11:35:30	0113	"	"	97		-1.25/2.0	
16	16	11:36:44	11:36:49	0113	"	"	97		-1.25/1.0	
17	17	11:37:58	11:38:03	0113	"	"	97		-1.25/0	
18	18	11:39:46	11:39:51	0100	"	"	97		-1.25/-1.0	
19	19	11:41:45	11:41:50	0113	"	"	126		1.0/2.0	
20	20	11:42:52	11:42:57	0113	"	"	126		1.0/3.0	
21	21	11:43:53	11:44:11	3334	GUST SIMULATION		926		1.0/3.0 .90/1.20	
22	22	11:45:11	11:45:16	0113	LEVEL FLIGHT		126		1.0/3.8	
23	23	11:45:49	11:46:02	3334	GUST SIMULATION		126		1.0/3.8 .84/1.22	
24	24	11:47:10	11:47:15	0113	LEVEL FLIGHT VH		136		1.5/3.8	
25	25	11:47:54	11:48:10	3334	GUST SIMULATION		136		1.5/3.8 .94/1.28	
26	26	11:48:47	11:48:52	0113	LEVEL FLIGHT VH		136		1.5/3.0	
27	27	11:50:28	11:50:59	3334	GUST SIMULATION		136		1.5/3.0 .80/1.25	
28	28	11:51:48	11:52:11	0113	LEVEL FLIGHT VH		136		1.5/2.0 .90/1.16	
29	29	11:53:17	11:53:32	0113	LEVEL FLIGHT		120		TRANS.	

PREPARED BY: H. STEINMANN  
 CHECKED BY:  
 DATE: 9-6-77  
 FLT DATE 8-29-77

DATA REQUEST EDIT TIMES  
 BOEING VERTOL COMPANY  
 A DIVISION OF THE BOEING COMPANY  
 EDITED FROM:  REAL TIME  
 A/C TAPE

PAGE NO. 1 OF 1  
 REPORT NO.  
 MODEL NO. H-46E/Glass Bla  
 F14 No. 5LP-1 X 137  
 TOTW 21,500 TOCG 9.7 A

Pilot Row#	Event No.	TIME No.	START HH:MM:SS	STOP HH:MM:SS	MANEUVER CODE	PILOT IAS	Nominal Hd	CYCLIC TRIM FWD/AFT	
								TIME	DESCRIPTION
1	1				0000	STATIC TEST RECORD			
2	2	15:15:04	15:15:09		0100	LEVEL FLIGHT	25	6000	-2.6/-2.5
3	3	15:17:28	15:17:33		0100	" "	50		
4	4	15:18:25	15:18:30		0100	" "	75		↓ ↓
5	5	15:21:01	15:21:06		0100	" "	100		-1.0/-1.0
6	6	15:23:42	15:23:47		0100	" "	110		-0.2/-0.2
7	7	15:26:27	15:26:32		0113	" "	110		0.9/0.9
8	8	15:28:08	15:28:13		0100	" "	119		↓ ↓
9	9	15:29:42	15:29:47		0113	" "	119		1.6/1.6
10	10	15:32:10	15:32:15		0100	" "	123		1.6/1.6
11	11	15:34:17	15:34:21		0100	" "	125		3.0/3.8
12	12	15:39:47	15:39:52		0113	" "	100		1.0/1.5
13	13	15:40:58	15:41:03		0113	" "	110		
14	14	15:42:27	15:42:32		0113	" "	120		
15	15	15:46:22	15:46:27		0113	" "	125		↓ ↓
16	16	15:50:39	15:51:07		0113	" "	125		1.0/2.0
17	17	15:59:41	15:59:46		0100	" "	75		-2.5/-2.5
18	18	16:01:40	16:01:45		0100	" "	75		94° Nr
19	19	16:03:16	16:03:21		0100	" "	50		
20	20	16:05:37	16:05:42		0100	" "	25		↓ ↓
21	21	16:07:57	16:08:22		0100	" "	95		-1.1/-1.0
22	22	16:09:18	16:09:24		0100	" "	100		↓ ↓ DSC
23	23	16:12:58	16:13:04		0114	" "	100		-2.5/-2.5 DSC
24	24	16:14:08	16:14:13		0114	" "	90		
25	25	16:15:31	16:15:36		0100	" "	75	↓	↓ ↓

Time slice Not Processed

PREPARED BY: H. STEINMANN  
 CHECKED BY:  
 DATE: 9-2-77  
 FILE DATE 8-30-77

DATA REQUEST EDIT TIMES  
 BOEING VERTOL COMPANY  
 A DIVISION OF THE BOEING COMPANY  
 Edited From:  REBIRTHS  
 A/C TAPE

PAGE NO. 1 OF 1

REPORT NO.

MODEL NO. H-46E/G1255 B122  
 FIT NO. SLP-1 X 138  
 TOGW 21,500 TOCG 9,778

Fuel 2332

Pilot Rebirth	No	START	STOP	MNU					
		TIME	TIME	CODE	MANEUVER	DESCRIPTION	Pilot A/S	NOMINAL DEPART.	
	No.	HH:MM:SS	HH:MM:SS						
	2	11:02:51	11:02:56	0100	LEVEL F/T		58	2000	
	3	11:03:49	11:03:54	0100	" "		29	"	
	4	11:05:15	11:05:20	0232	HOVER OGE		0	"	
	5	11:05:50	11:05:56	3404	LAT. CONT REV.		0	"	
	6	11:05:57	11:06:04	3401	LONG. CONT REV.		0	"	
	7	11:06:09	11:06:15	1726	TURN REV. L-R		0	"	
	8	11:06:17	11:06:21	1726	" " R-L		0	"	
	9	11:08:05	11:08:10	0100	LEVEL F/T		88	"	
	10	11:10:08	11:10:13	0100	" "		117	"	
	11	11:12:28	11:12:33	0100	" "		128	"	
	12	11:16:15	11:16:35	0100	" " VH		137	"	
	13	11:18:56	11:19:20	3200	DRIVE PUR		145	"	
	14	11:21:21	11:21:26	0030	LT. S/S		131	"	
	15	11:22:02	11:22:07	0030	RT S/S		131	"	
	16	11:23:05	11:23:21	2615	LT TURN 30°		131	"	(ATTITUDE CYCLES CACED)
	17	11:34:22	11:34:50	2615	" " "		131	"	
	18	11:35:05	11:35:35	2616	RT TURN "		131	"	
	19	11:38:29	11:39:51	2615	LT TURN "		123	"	
	20	11:39:14	11:39:44	2616	RF TURN "		123	"	10 Seconds of Data N G on Tap
	21	11:40:12	11:40:22	2801	LONG PULLUP		123	"	
	22	11:41:12	11:41:47	2810	SOFT PULLMANEUVER 123 MISSED"ON A/C TAPE"				
	23	11:43:51	11:43:57	3404	LAT CONT REV		137	"	
	24	11:43:59	11:44:04	3401	LONG CONT REV		137	"	
	25	11:44:05	11:44:11	3407	DIRECT CONT REV		137	"	
	26	11:45:28	11:45:35	3404	LAT CONT REV		128	"	
	27	11:45:38	11:45:43	3401	LONG CONT REV		128	"	
	28	11:45:44	11:45:49	3407	DIRECT CONT REV		128	"	
	29	11:47:45	11:47:53	2801	LONG PULLUP		88	"	
	30	11:48:04	11:48:10	2810	CILL. PULLUP		88	"	
	31	11:48:39	11:49:00	2616	RT TURN 30°		88	"	
	32	11:49:06	11:49:29	2615	LT TURN "		88	"	
	33	11:49:41	11:50:00	2615	LT TURN 45°		88	"	Target 3 seconds of Data N G on Tap 11:49:44
	34	11:50:12	11:50:30	2616	RT TURN "		1	"	
	35	11:52:29	11:53:08	1923	ACCEL - RAPID	0-130	1	"	
	36	11:53:09	11:53:35	1923	" "	130-V <sub>1</sub> (130)	1	"	
	37	11:56:43	11:57:15	2837	SIMULATED A/R LNDG	120 - "			

PREPARED BY: H. Steinmann  
 CHECKED BY:  
 DATE: 9-7-77  
 FLT DATE 8-30-77

DATA REQUEST EDIT TIMES  
 BOEING VERTOL COMPANY  
 A DIVISION OF THE BOEING COMPANY  
 Edited From:  REAL TIME  
 A/C TAPE

PAGE NO. 1 OF 1  
 REPORT NO.

MODEL NO. H-46E/G1255 E132  
 FIT NO. SLP-1 X 139  
 TOGW 21,500 TOCG 7,774

FUEL 2300#

Pilot Record	Event	Start	Stop	MVTR					
No.	No.	HH:MM:SSS	HH:MM:SSS						
1	1	15:37:00	15:37:04	0000	STATIC TEST RECORD				
3	2	16:02:42	16:03:06	2616	RT TURN 30° MLD	75	6000	-2.5/-2.5	
1	3	16:03:16	16:03:43	2615	LT TURN 30° MLD	75			
4	4	16:04:10	16:04:33	2616	RT TURN 45°	75			
1	5	16:04:34	16:05:06	2615	LT TURN 45°	75			
5	6	16:05:43	16:05:46	2801	CYCCLIC PULLUP 1.28g	75			
1	7	16:05:49	16:06:00	2801	" " 1.82 1.36	75			
1	8	16:06:01	16:06:14	2801	" " 1.74 1.36	75			
6	9	16:06:48	16:06:53	2810	CYCCLIC PULLUP 1.45g	75			
1	10	16:06:54	16:06:59	2810	" " 1.48g	75			
7	11	16:08:34	16:08:52	2615	LT TURN 30° MLD	38			
1	12	16:08:55	16:09:18	2616	RT TURN 30° MLD	38			
8	13	16:12:28	16:12:38	0100	LEVEL FET Vne (CG5)	116		0.8/0.8	LT TURN
9	14	16:14:48	16:15:03	2615	LT TURN 25°	105		-0.5/-0.5	
10	15	16:15:40	16:15:53	2616	RT TURN 30°	105			
11	16	16:16:45	16:17:06	2616	RT TURN 30°	105			
12	17	16:18:10	16:18:23	2801	CYCCLIC PULLUP 1.82/1.18g	105			
13	18	16:18:52	16:18:59	2810	COLL. PULLUP 1.28g	105			
1	19	16:19:00	16:19:06	2810	COLL. PULLUP 1.44g	105			
14	20	16:20:40	16:20:45	0030	LT. SIDE TURN 10°	105			
1	21	16:21:13	16:21:18	0030	RT SIDE TURN 10°	105			
15	22	16:22:18	16:22:22	3404	CAT CONT REV 53-35-61	105			
1	23	16:22:23	16:22:28	3404	" " 52-31-63	105			
1	24	16:22:29	16:22:34	3401	LONG " " 65-51-72	105			
1	25	16:22:35	16:22:42	3407	DIRECT " " 55-66-49	105			
1	26	16:22:48	16:22:54	3407	" " 55-68-51	105			
1	27	16:22:55	16:22:59	3407	" " 56-70-45	105			
16	28	16:24:36	16:24:41	0500	PPD 500 FOM	100	6000-2000	-1.0/-1.0	
1	29	16:24:50	16:24:55	0500	" 1000 "	100			
1	30	16:25:09	16:25:14	0500	" 1500 "	100			
17	31	16:27:18	16:27:35	0619	AIR ENTRY	105		-0.5/-0.5	
1	32	16:27:39	16:27:44	0600	AIR STEADY	105			
1	33	16:27:45	16:27:59	2637	AIR RT TURN 30°	105			
1	34	16:28:00	16:28:14	2637	AIR LT TURN 35°	105			
1	35	16:28:15	16:28:28	2837	AIR CYCLIC PULLUP 1.56g	105			
1	36	16:28:32	16:28:37	2837	AIR COLL. PULLUP 1.7g	105			
18	37	16:31:30	16:31:36	3437	AIR LAT CONTR REV 47-27-61	105			
1	38	16:31:37	16:31:40	3437	AIR LONG CONTR REV 47-27-61	105			
1	39	16:31:41	16:31:45	3437	AIR DIRECT " " 65-48-64	105			
1	40	16:31:46	16:31:50	3437	AIR " " 58-67-48	105			
1	41	16:31:55	16:32:31	0423	SP. AC DETOUR RT 45°	105			
19	42	16:34:07	16:34:23	2615	LT. TURN 30°	44	2000	-2.5/-2.5	
1	43	16:34:25	16:34:36	2616	RT. TURN 30°	44			
20	44	16:35:13	16:35:22	2615	LT TURN 45°	44			
21	45	16:35:55	16:36:17	2616	RT TURN 45°	44			
22	46	16:40:26	16:41:34	2200	FLARE TO HOVER				
23	47	16:42:57	16:43:32	2200	" " "				
24	48	16:44:42	16:44:54	2200	" " "				
25	49	16:45:34	16:45:50	2200	" " "				

STEEP APPROACH - Auto Turn 5° N.W.  
 NORMAL " " 13° N.W.  
 SHALLOW " " " 17° N.W.  
 " " " 21° N.W.

PREPARED BY: HHS/STEINMANN  
CHECKED BY:  
DATE: 9-8-77  
FUT DATE: 8-31-77 E

## DATA REQUEST EDIT TEMPL

**BOEING VERTOL COMPANY**  
A DIVISION OF THE BOEING COMPANY

A DIVISION OF THE BOEING COMPANY

PAGE NO. 1071

**REPORT NO.**

MODEL NO. H-46E/ Glass Blane  
FIT NO. SLP-1 X 140  
TOGW 25,000 TOCG 4.35" F

Pilot Record	BATCH	START	STOP	MIN/M				Fuel 2300#
Event		TIME	TIME	CODE	MANEUVER DESCRIPTION			
No	No.	HH:MM:SS.S	HH:MM:SS.S					
13	1	09:41:21	09:41:26	0231	HOVER IGE			
14	2	09:41:50	09:42:18	1715	LEFT SPOT TURN			
15	3	09:42:20	09:42:45	1716	RIGHT SPOT TURN			
16	4	09:43:12	09:43:13	3404	LAT CONT REV IN HOVER	MISSING 29.0M	A/C TRIM	
17	5	09:43:14	09:43:19	3404	" "	"	45-23-65	
18	6	09:43:21	09:43:25	3401	LONG "	"	45-69-35	
19	7	09:43:27	09:43:32	3407	DIRECT "	"	45-61-29	
20	8	09:44:04	09:44:13	1726	L-R TURN REVERSAL	"	12-76-53	
21	9	09:44:16	09:44:25	1726	R-L "	"	82-10-47	
22	10	09:45:49	09:45:54	1122	TAXI STRAIGHT - SLOW			
23	11	09:46:04	09:46:15	1116	RT TAXI TURN - SLOW			
24	12	09:46:50	09:47:09	1115	LT TAXI TURN - SLOW			
25	13	09:49:24	09:50:28	1516	RT SIDEWARD F/T	10-20-30-35 KTS	TAXI TRIM SETTING 2.8	
26	14	09:55:03	09:55:19	1905	ACCEL: HOVER - 10 KTS LT SIDEWARD F/T			
27	15	09:55:20	09:55:25	1515	10 KTS LT SIDEWARD F/T			
28	16	09:55:26	09:55:42	1905	ACCEL 10-20 KTS LT SIDEWARD F/T		AUTO TRIM - 2.5	
29	17	09:55:43	09:55:48	1515	20 KTS LT SIDEWARD F/T			
30	18	09:55:49	09:56:01	1905	ACCEL 20-30 KTS LT SIDEWARD F/T			
31	19	09:56:02	09:56:07	1515	30 KTS LT SIDEWARD F/T			
32	20	09:56:08	09:56:17	1905	ACCEL 30-35 KTS LT SIDEWARD F/T			
33	21	09:56:18	09:56:23	1515	35 KTS LT SIDEWARD F/T.			
34	22	09:56:24	09:56:32	1520	RECOVERY FROM 35 KTS LT SIDEWARD F/T.			
35	23	09:59:22	09:59:29	1906	ACCEL HOVER - 10 KTS RT SIDEWARD F/T			
36	24	09:59:30	09:59:35	1516	10 KTS RT SIDEWARD F/T.			
37	25	09:59:36	09:59:44	1906	ACCEL 10-20 KTS RT SIDEWARD F/T			
38	26	09:59:45	09:59:50	1516	20 KTS RT SIDEWARD F/T.			
39	27	09:59:51	10:00:08	1906	ACCEL 20-30 KTS RT SIDEWARD F/T			
40	28	10:00:09	10:00:14	1516	30 KTS RT SIDEWARD F/T.			
41	29	10:00:15	10:00:24	1906	ACCEL 30-35 KTS RT SIDEWARD F/T			
42	30	10:00:25	10:00:30	1516	35 KTS RT SIDEWARD F/T.			
43	31	10:00:31	10:00:40	1520	RECOVERY FROM 35 KTS RT SIDEWARD F/T.			
44	32	10:02:53	10:03:03	1921	ACCEL: HOVER - 10 KTS REARWARD F/T			
45	33	10:03:04	10:03:09	1600	10 KTS REARWARD F/T.			
46	34	10:03:10	10:03:30	1921	ACCEL 10-20 KTS REARWARD F/T			
47	35	10:03:31	10:03:36	1600	20 KTS REARWARD F/T			
48	36	10:03:37	10:03:53	1921	ACCEL 20-30 KTS REARWARD F/T			
49	37	10:03:54	10:03:59	1600	30 KTS REARWARD F/T			
50	38	10:04:00	10:04:10	1920	RECOVERY FROM 30 KTS REARWARD F/T			
51	39	10:07:09	10:07:34	2200	FLARE TO HOVER - Normal Approach		11° NOSE UP	
52	40	10:09:52	10:10:20	2200	" " "	STEER	5° NOSE UP	
53	41	10:12:25	10:12:49	2200	" " "	SHALLOW	16.5° NOSE UP	
54	42	10:14:42	10:14:54	2200	" " "	" "	22° NOSE UP	
55	43	10:15:38	10:15:36	1400	JUMP TAKEOFF MISSED DART OUT MNVR ON A/C TAKEOFF			
56	44	10:16:30	10:16:34	1823	VERTICAL DESCENT TO LANDING	1.52g		
57	45	10:17:54	10:18:19	1116	RT TAXI TURN - RAPID			
58	46	10:18:20	10:18:45	1115	LT TAXI TURN - RAPID			

PREPARED BY: H. STEINMANN

CHECKED BY:

DATE: 9-9-77

FLT DATE 8-31-77

## DATA REQUEST Edit Times

BOEING VERTOL COMPANY

A DIVISION OF THE BOEING COMPANY

Editor Form:  LOGICAL  
 A/C TAPE

PAGE NO. 1 OF 2

REPORT NO.

MODEL NO. 1146E/Class E  
FLG NO. SLP-1 X 141  
TOGW 25000 TCC 4.35 V

PILOT REAR:	EVENT	START	STOP	MIN/M					
		TIME	TIME	CODE	MANEUVER	DESCRIPTION	PICOT STS	NOMINAL HD	CYCLOC TRIM
1	1	15:13:30	15:13:33	0000	STATIC	TEST RECORD			
2	2	15:19:31	15:19:41	2313	TRANSITION	40-70	1700	-2.8/-2.8	
1	3	15:19:42	15:20:02	2200	FLARE TO FLIGHT	70-0	1	11"	
3	4	15:21:45	15:21:50	0300	CLIMB	70	1900	-2.7/-2.6	
4	5	15:22:37	15:22:42	0300	"		2700		
5	6	15:23:37	15:23:42	0300	"		3700		
6	7	15:24:45	15:24:50	0300	"		4700		
7	8	15:25:54	15:25:59	0300	"		5600		
8	9	15:27:26	15:27:31	0300	"		6800	2.7/3.6	
9	10	15:28:45	15:28:50	0300	"		7700		
10	11	15:30:23	15:30:28	0300	"		8500		
11	12	15:31:00	15:31:05	0300	"		8800		
1	13	15:31:25	15:31:30	0100	LEVEL FLIGHT		8700		
12	14	15:32:57	15:33:02	0500	PPD 500 fpm	76	8600		
15	15	15:33:11	15:33:16	0500	" 1000		8500		
16	16	15:33:20	15:33:25	0500	" 1500		8300		
17	17	15:33:26	15:33:49	0520	" RECOVERY		8000		
13	18	15:34:54	15:34:59	0100	LEVEL FLIGHT	70	8300		
14	19	15:35:45	15:35:50	0100	" "	80	8400		
15	20	15:36:44	15:37:04	0100	" "	90			
16	21	15:38:05	15:38:10	0100	" "	95	8500		
17	22	15:38:11	15:38:39	3334	GUST SIMULATION	1			
17	23	15:40:15	15:40:20	0100	LEVEL FLIGHT	60	8200		
18	24	15:41:21	15:41:26	0100	" "	50			
19	25	15:43:50	15:44:20	0100	" " Vmin(1.10)	40			
20	26	15:45:26	15:46:27	2615	LT. TURN 15°	80			
21	27	15:46:50	15:47:39	2616	RT. TURN 18°	80			
22	28	15:48:05	15:48:09	3404	LAT CONT REV.	80		58-33-32-31	
1	29	15:49:11	15:49:15	3401	LONG "	80		71-85-61-83	
1	30	15:49:19	15:49:21	3407	DIRECT "	80		56-44-69-46	
23	31	15:49:44	15:49:49	0030	LT S/S 10°	80			
1	32	15:49:00	15:49:05	0030	RT S/S 10°	80			
24	33	15:49:36	15:49:45	2801	CYCLOC PULLUP 1.2g	80			
25	34	15:50:15	15:50:18	2810	CYCLOC PULLUP 1.28g	80	LOAD FACTOR MISSED ON TAPE		
26	35	15:52:06	15:52:54	2616	RT TURN 30°	57			
27	36	15:53:38	15:54:28	2615	LT TURN 26°	57			
28	37	15:55:13	15:55:22	2801	CYCLOC PULLUP 1.1g	57			
29	38	15:56:25	15:56:30	2810	CYCLOC PULLUP 1.28g	57			
30	39	15:57:52	15:57:57	0600	AIR STEADY	70	8300		
1	40	15:57:59	15:58:14	2637	A/R RT TURN 30°	70	7700		
1	41	15:58:15	15:58:38	2637	A/R LT TURN 35°	70	6800		
42	15:58:40	15:58:51	2837	AIR CYCLOC PULLUP 1.52g	70	6500			
43	15:58:58	15:59:02	2837	AIR CYCLOC PULLUP 1.62g	70	5500			
31	44	16:04:00	16:04:25	0619	AIR ENTRY	85	8700		
1	45	16:04:26	16:04:31	0600	AIR STEADY	85	7800		
46	16:04:32	16:05:02	2637	A/R LT TURN 18°	85	7000			
47	16:05:03	16:05:17	2637	A/R RT TURN 30°	85	6100			
48	16:05:20	16:05:27	2837	AIR CYCLOC PULLUP 1.42g	85	5700			
1	49	16:05:33	16:05:37	2837	AIR CYCLOC PULLUP 1.5g	85	5400		
32	50	16:08:26	16:08:31	0100	LEVEL F/T	80	6400	-2.4/-2.2	
33	51	16:09:18	16:09:23	0113	" "	100	1	-1.9/-1.3	

PREPARED BY: H. STEINMAIS  
CHECKED BY:  
DATE: 9-9-77  
FILE DATE 8-31-77

## DAM LOWEST EDIT TIMES

**BOEING VERTOL COMPANY**  
A DIVISION OF THE BOEING COMPANY

A DIVISION OF THE BOEING COMPANY

B. A. D. T. 1915

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PAGE NO. 2 OF 2

REPORT NO.

REV. G. W. H.

MODEL NO. 11-10031  
FIT NO. SLP-1 K-141  
TOTAL 25,000 100% 4.35" F

PILOT RECORD	BATCH 6/6/87	START	STOP	MILES	MANEUVER	DESCRIPTION	PILOT IAS	NOMINAL HD	CYCLIC TRIM	FUEL 2300#
		TIME	TIME	CODE						
No.	No.	HH:MM:SS	HH:MM:SS							
34	52	16:10:05	16:10:25	0113	LEVEL FLIGHT		110	6400	0/0.9	LT DIS
35	53	16:14:15	16:14:20	0113	" "		110	3200	1	
36	54	16:15:02	16:15:12	0113	" "		120		1/2/2.5	
37	55	16:15:30	16:16:07	2616	RT TURN 20°		120		Auto	ENTRY NOT INCLUDED
38	56	16:16:55	16:17:25	0113	LEVEL FLIGHT (VN)		130		1/2/2.5	
39	57	16:22:53	16:23:05	2200	FLARE TO HANG		50-0	800	-2.7/-2.7	

PREPARED BY: H. STEINMANN

CHECKED BY:

DATE: 9-9-77

## DATA REQUEST EDIT FORM

BOEING VERTOL COMPANY  
A DIVISION OF THE BOEING COMPANY

FLT DATE: 9-1-77

EDITED FROM:  Home Tape  
 A/C TAPE

PAGE NO. 1052

REPORT NO.

MODEL NO. H-46E/412557  
FLT NO. SLP-1 Y 142  
TOGW 25000 TCG 435°F

PILOT NAME	PART NO.	TIME HH:MM:SS	STOP HH:MM:SS	TIME	CODE	MANEUVER	DESCRIPTION	PILOT IAS	NOMINAL HD	CYCLIC THR END/DET
1	1	14:50:05	14:50:09	0000		STATIC TEST RECORD				
2	2	14:55:11	14:55:30	2313		TRANSITION	0-60	1700	-2.7/-2.7	
3	3	14:59:03	14:59:13	0100		LEVEL FLIGHT	50	3300	-2.7/-2.7	
4	4	15:00:50	15:00:55	0100		"	40			
5	5	15:01:40	15:01:53	0100		"	30			
6	6	15:03:29	15:03:34	0100		"	60			
7	7	15:04:29	15:04:34	0100		"	70			
8	8	15:05:45	15:05:50	0100		"	80		-2.3/-2.6	
9	9	15:07:04	15:07:09	0100		"	90		-1.6/-1.7	
10	10	15:08:28	15:08:33	0100		"	100		-1.0/-1.0	
11	11	15:09:58	15:10:03	0100		"	110		-0.1/-0.1	
12	12	15:11:31	15:11:36	0100		"	120		1.3/0.5	
13	13	15:13:25	15:13:55	0100		" VH	123		1.4/1.1	
14	14	15:14:00	15:14:20	3334		GUST SIMULATION	123			
15	15	15:16:10	15:16:40	0113		LEVEL FLIGHT VH	126	3700	2.8/3.6	
16	16	15:19:19	15:19:23	0100		LEVEL FLIGHT	75	3200	-2.6/-2.6	94% HD
17	17	15:20:37	15:20:42	0100		"	50			
18	18	15:21:25	15:21:30	0100		"	30			
19	19	15:22:50	15:23:00	0100		"	98		-1.0/-0.9	
20	20	15:24:05	15:24:25	0100		"	105		-0.7/-0.5	L+25C
21	21	15:26:42	15:26:47	0114		LEVEL FLIGHT	75		-2.6/-2.6	RETRACTED TURN
22	22	15:27:24	15:27:29	-0114		"	85			
23	23	15:27:54	15:27:59	0114		"	90			
24	24	15:28:28	15:28:33	0114		"	95			
25	25	15:29:37	15:29:42	0114		"	100			
26	26	15:30:16	15:30:21	0114		"	105			L+25C
27	27	15:31:33	15:32:03	2615		LT. TURN 30° MC	110		Auto/0	
28	28	15:32:15	15:32:46	2616		RT. TURN 30° "	110			
29	29	15:33:21	15:33:45	2615		LT TURN 30° UP	110			
30	30	15:34:00	15:34:30	2616		RT TURN 30° UP	110			
31	31	15:35:06	15:35:11	3404		LAT CONT REV	110			54-22-64-36
32	32	15:35:14	15:35:19	3401		LONG CONT REV	110			75-88-62-80
33	33	15:35:20	15:35:25	3407		DIRECT "	110			52-37-64-44
34	34	15:35:42	15:35:47	0030		10° RT 5/5	110			
35	35	15:35:57	15:36:02	0030		10° LT 5/5	110			
36	36	15:36:23	15:36:31	2801		CYCLOC PULLUP 1.3g	110			L+25C
37	37	15:36:56	15:37:01	2810		CYCLOC PULLUP 1.35g	110			L+25C
38	38	15:37:48	15:37:53	2810		" 1.43g	110			
39	39	15:39:48	15:39:52	3404		LAT CONT REV	123		Auto/1.1	50-32-64
40	40	15:40:02	15:40:06	3401		LONG "	123			70-86-59 L+25C
41	41	15:40:10	15:40:14	3407		DIRECT "	123			55-38-66 25C
42	42	15:41:31	15:41:52	2615		LT. TURN 30° MC	74			-2.6/-2.6
43	43	15:41:54	15:42:14	2616		RT "	74			L+25C 50%
44	44	15:42:43	15:43:04	2615		LT TURN 45° UP	74			
45	45	15:43:08	15:43:34	2616		RT "	74			
46	46	15:44:13	15:44:23	2801		CYCLOC PULLUP 1.35g	74			
47	47	15:44:43	15:44:48	2810		COLL. PULLUP 1.5g	74			
48	48	15:45:40	15:46:00	2615		LT TURN 30° MC	40			ENTRY MISSED
49	49	15:46:04	15:46:26	2616		RT "	40			
50	50	15:47:44	15:47:49	0500		PPD 500 fpm	98			
51	51	15:47:55	15:48:00	0500		" 1000 "	98	3200		

PREPARED BY: H. STEINMANN  
 CHECKED BY:  
 DATE: 9-9-77  
 FLT DATE 9-1-77

DATA REQUEST EDIT Tapes  
 BOEING VERTOL COMPANY  
 A DIVISION OF THE BOEING COMPANY  
 Edited From:  AIR TAPE

PAGE NO. 1 20F2  
 REPORT NO.  
 MODEL NO. 11-445/100-11-  
 FLT NO. 5LP-1 X 142  
 TOW 25000 TUG 235°F

PILOT RECORD	BANK	START	STOP	TIME	CODE	MANEUVER	DESCRIPTION			Fuel 2300
							Pilot IPS	Nominal HD	Cyclic THR FWD/RET	
No.	No.	H:MM:SS	H:MM:SS							
42	52	15:48:10	15:48:15	0500	PPD 1500 rpm		98	2900	Auto/-1.9	
43	53	15:49:49	15:49:54	0600	AIR STEADY		70	3900	Auto/-2.6	
44	54	15:49:55	15:50:08	2637	AIR LEFT TURN 43°		70	3500		
45	55	15:50:09	15:50:27	2637	AIR RT TURN 40°		70	2800		
46	56	15:50:28	15:50:37	2837	AIR Cyclic Pullup 1.52g		70	2200		
47	57	15:52:16	15:52:20	2837	A/R Cyclic Pullup 1.68g		70	3200		
48	58	15:52:21	15:52:45	0423	SPRAL DESCENT LT 48°		70	2300		
49	59	15:52:47	15:53:03	2837	AIR LANDING (SIMULATED)		70	1700		
50	60	15:55:55	15:55:59	0600	AIR STEADY		110	4200	Auto/0.2	
51	61	15:56:00	15:56:13	2637	A/R RT TURN 33°		110	3700		
52	62	15:56:14	15:56:38	2637	A/R LT TURN		110	2600		
53	63	16:00:00	16:00:09	2837	AIR Cyclic Pullup 1.44g		110	3700		
54	64	16:00:10	16:00:15	2837	A/R Cyclic Pullup 1.72g		110	3400		
55	65	16:00:16	16:00:33	0423	SPRAL DESCENT RT 48°		110	2700		297 Ns/1.92
56	66	16:00:34	16:00:45	2837	AIR LANDING (SIMULATED)		110	2300		
57	67	16:01:44	16:01:49	2600	LT BANK 16°		80	2600	Auto/-2.6	FLY Qual Test
58	68	16:01:53	16:01:59	2600	" "	25°	90			
59	69	16:02:07	16:02:30	2600	" "	45°	80			
60	70	16:03:45	16:03:52	2600	LT. BANK 20°		100	2800	Auto/-1.8	
61	71	16:03:55	16:04:02	2600	" "	25°	100			
62	72	16:04:10	16:04:14	2600	" "	35°	100			
63	73	16:04:18	16:04:24	2600	" "	42°	100			
64	74	16:05:43	16:05:57	2600	LEFT BANK 15°		120	3100	Auto/.8	
65	75	16:06:02	16:06:07	2600	" "	20°	120			
66	76	16:06:15	16:06:21	2600	" "	30°	120			
67	77	16:06:26	16:06:39	2600	" "	40°	120			
68	78	16:09:25	16:09:50	2200	FLARE TO HOVER		80-0	1700	Auto/Auto	

✓  
 All Reg  
 Fwd Sel Hpt

PREPARED BY: HHS/MAIAHAN  
 CHECKED BY:  
 DATE: 9-27-77  
 FILE DATE: 9-2-77

DATA REQUEST CD-1700-5  
 BOEING VERTOL COMPANY  
 A DIVISION OF THE BOEING COMPANY  
 EDITED FROM:  LIGHT TAPE  
 A/C TAPE

PAGE NO. 10F-1  
 REPORT NO.  
 MODEL NO. 41445/1000-001  
 FIT NO. SLP 1 X 143  
 TOWN 18,960 1,000 3.5" A  
 FUEL 2300#

PILOT RECORD	BATCH EVENT	START	STOP	MANEUVER	EXT. LOAD	OPEN TOWN 24,900# / 1.5" A	
		TIME	TIME	CODE	MANEUVER	PILOT IAS	NOMINAL H <sub>3</sub>
No	No	H:MM:SS	H:MM:SS				TRIM FWD/AFT
2	1	10:33:23	10:33:28	0231	HOVER ICE - NO LOAD	0	=
3	2	10:35:06	10:35:20	4431	LOAD PICK - UP	-	=
4	3	10:36:17	10:36:22	0231	HOVER ICE - WITH LOAD	-	"
6	4	10:38:37	10:38:50	4431	LOAD PICK - UP	-	"
7	5	10:40:38	10:40:52	2313	TRANSITION - WITH LOAD	0-50	=
↓	6	10:40:55	10:41:44	2200	FLARE TO HOVER	50-0	"
8	7	10:42:23	10:42:42	2313	TRANSITION	0-65	"
1	8	10:42:43	10:43:10	2200	FLARE TO HOVER	65-0	"
9	9	10:45:18	10:45:31	2313	TRANSITION	0-70	"
10	10	10:46:35	10:46:55	0316	RT CLIMBING TURN 10°	60	"
↓	11	10:47:00	10:47:05	0300	CLIMB - MAX PWR	60	"
11	12	10:49:40	10:49:55	0100	LEVEL FLIGHT	60	2000
12	13	10:50:40	10:51:05	0100	" "	70	"
13	14	10:51:55	10:52:05	0100	" "	80	"
14	15	10:52:15	10:52:37	2616	RT TURN 14°	80	"
15	16	10:53:35	10:53:40	0100	LEVEL FLIGHT	90	"
16	17	10:55:05	10:55:10	0100	" "	100	"
17	18	10:56:20	10:56:40	0100	" "	110	"
18	19	10:57:55	10:58:20	0100	" "	113	"
↓	20	10:58:21	10:58:36	2022	DECELERATION - SLOW	113-100	"
21	21	10:59:05	10:59:40	2616	RT TURN 14°	105	"
20	22	11:00:33	11:00:39	2620	RT TURN RECOVERY	105	"
21	23	11:01:30	11:01:35	0500	PPD 500 fpm	70	"
↓	24	11:01:42	11:01:47	0500	PPD 1000 fpm	70	"
↓	25	11:01:49	11:01:59	0520	PPD RECOVERY	70	"
22	26	11:02:35	11:03:31	2615	LT TURN 18°	105	"
23	27	11:03:44	11:04:27	2616	RT TURN 21°	105	"
24	28	11:05:25	11:05:30	0100	LEVEL FLIGHT	60	"
1	29	11:06:10	11:06:15	0100	" "	60	"
25	30	11:07:05	11:07:10	0100	" "	70	"
26	31	11:07:55	11:08:00	0100	" "	80	"
27	32	11:09:20	11:09:25	0100	" "	90	"
28	33	11:10:15	11:10:20	0100	" "	100	"
29	34	11:11:25	11:11:50	0100	" "	110	"
30	35	11:12:10	11:13:10	2615	LT TURN 18°	105	"
31	36	11:13:54	11:14:04	0100	LEVEL FLIGHT V <sub>H</sub>	120	"
↓	37	11:14:05	11:14:22	2022	DECELERATION - SLOW	120-100	"
32	38	11:14:35	11:15:38	2616	RT TURN 20°	105	"
33	39	11:16:55	11:17:00	0500	PPD 500 fpm	70	"
↓	40	11:17:14	11:17:19	0500	PPD 1000 fpm	70	"
↓	41	11:17:20	11:17:28	0520	PPD RECOVERY	70	"
35	42	11:20:40	11:21:20	2200	FLARE TO HOVER	60-0	"
36	43	11:21:46	11:22:20	2200	FLARE TO HOVER	60-0	"
37	44	11:23:48	11:23:56	4731	LOAD DROPON GRASS	0	"
38	45	11:25:11	11:25:20	4431	LOAD PICK - UP	-	"
46	46	11:25:50	11:25:59	4731	LOAD RELEASE @ RAMP	-	"
47	47	11:36:07	11:36:12	0100	LEVEL FLIGHT	120	2000
41	48	11:36:44	11:36:49	0100	" "	130	"
42	49	11:37:51	11:38:01	0100	" "	140	"
1	50	11:38:05	11:39:25	3334	GUST SIMULATION V <sub>H</sub>	140	"

PREPARED BY: H H STEINMANN  
 CHECKED BY:  
 DATE: 9-26-77

DATA REQUEST EDIT TIMES  
 BOEING VERTOL COMPANY  
 A DIVISION OF THE BOEING COMPANY

EDITED FROM:  A/C TAPE

PAGE NO.  
 REPORT NO.  
 MODEL NO. H-46E/Class Blade  
 FIT NO. SLP-1 X 151  
 TOGW 21500 TUG 9.6 A

Pilot Resr	Event No.	Start Time H:M:S.S	Stop Time H:M:S.S	Min	Code	Name	Description	Pilot INT			Fuel 2300# ED's INSTALLED
								Hp	Trim		
2	1	13:34:30	13:34:35	0000			STATIC TEST RECORD				
3	2	13:41:53	13:42:06	2313			TRANSITION (0-80 kts)				
4	3	13:44:20	13:44:25	0100			LEVEL FLIGHT	80	1200'	Auts	
5	4	13:45:24	13:45:29	0100			" "	90	"	"	
6	5	13:46:32	13:46:37	0100			" "	100	"	"	
7	6	13:47:38	13:47:43	0100			" "	110	"	"	
8	7	13:48:47	13:48:52	0100			" "	120	"	"	
9	8	13:50:10	13:50:15	0100			" "	127	"	"	
10	9	13:52:01	13:52:23	2615			LEFT TURN 30°	115	"	"	
11	10	13:52:37	13:53:00	2616			RIGHT TURN 30°	115	"	"	
12	11	13:53:16	13:53:38	2615			LEFT TURN 41°	115	"	"	
13	12	13:54:19	13:54:41	2616			RIGHT TURN 36°	115	"	"	
14	13	14:00:32	14:00:37	0100			LEVEL FLIGHT	80	4900'	"	
15	14	14:01:24	14:01:29	0100			" "	90	"	"	
16	15	14:03:05	14:03:10	0100			" "	100	"	"	
17	16	14:04:17	14:04:22	0100			" "	110	"	"	
18	17	14:06:13	14:06:18	0100			" "	117	"	"	
19	18	14:08:16	14:08:35	2616			RIGHT TURN 28°	108	"	"	
20	19	14:08:56	14:09:16	2615			LEFT TURN 30°	108	"	"	
21	20	14:10:46	14:11:05	2616			RIGHT TURN 42°	90	"	"	
21	21	14:12:00	14:12:05	0100			LEVEL FLIGHT	80	"	"	
22	22	14:12:23	14:12:28	0100			" "	80	"	MAN END	
23	23	14:12:54	14:12:57	0100			" "	80	"	"	
24	24	14:14:00	14:14:05	0100			" "	90	"	"	
25	25	14:15:10	14:15:15	0100			" "	100	"	"	
26	26	14:16:05	14:16:12	0100			" "	110	"	"	
27	27	14:18:15	14:18:55	0100			" "	120	"	"	
28	28	14:20:26	14:20:47	2615			LEFT TURN 35°	107	"	"	
29	29	14:21:03	14:21:22	2616			RIGHT TURN 28°	107	"	"	

All turns  
performed

GENERATED BY: H. Steinmann  
 CHECKED BY:  
 DATE: 9-30-77  
 FCT DATE 9-30-77

DAM REQUEST EDIT TIMES

BOEING VERTOL COMPANY  
 A DIVISION OF THE BOEING COMPANY

Editor From:  Real Time TABLE 1  
 A/C TAPE

PAGE NO.  
 REPORT NO.

MODEL NO. 11-6651-003-000  
 FIT NO. SCP-1 X 161  
 TOW 24500 TUG 22.4°F

Pro. Record	Event	Start	Stop	Min.						Fuel 1900
		TIME	TIME	CODE	MANEUVER	DESCRIPTION	Pilot	Navigat	CYCLE	
No.	No.	HH:MM:SS	HH:MM:SS				IAS	HD	TIME	
2	2	10:39:25	10:39:32	0100	LEVEL FLIGHT		30	2500	AUTO	
3	3	10:40:51	10:40:53	0120	" "		60	"	"	
4	4	10:42:49	10:42:55	0100	" "		90	"	"	
5	5	10:45:25	10:45:22	0100	" "		115	"	"	
6	6	10:47:32	10:47:42	0100	" "		130	"	"	
7	7	10:49:34	10:49:52	0100	" "	VH	136	"	"	
8	8	10:50:44	10:50:54	3200	FULL PURGE	VAC 146	"	"	"	-1000 ft/m
9	9	11:06:07		2200	NORMAL	AOP. TO HIGHER			"	

STOP TIME TO BE DETERMINED FROM A/C TAPE AT  
 END OF DATA RECD

Note: RECORD/EVENT NO. 8 APPEARED TO HAVE  
 ERRATIC DATA ON AFT ROTOR ROTATING  
 MEASUREMENTS AS OBSERVED ON  
 THE BRUSH TABLE NO. 4.

PREPARED BY: *H. Steinmann*  
CHECKED BY:  
DATE: 10-3-77  
RET DATE 10-3-77

DAM RUMMET EDIT TESTS  
BOEING VERTOL COMPANY

**BOEING VERTOL COMPANY**  
A DIVISION OF THE BOEING COMPANY

Edited From:  ~~Long Table~~ TABLE 1  
 A/C TYPE

PAGE 10.

REPORT NO.

MODEL NO.

FIT No. SLP-1 X 162  
TOC 21,500 TCG 22.4%

Febr 1900

NOTE: PILOT IAS CODE 80020 UPPER B.E. = 161.6 KB

Co-Pilot IAS Code 80370 " " = 157.9 kts

Sheet 01

Aimie

PREPARED BY: H. STEINMANN  
CHECKED BY:  
DATE: 10-4-77  
F/T DATE 10-4-77

DATA REQUEST Edit Times  
BOEING VERTOL COMPANY  
A DIVISION OF THE BOEING COMPANY  
Edited From:  REAR TAPE Tab 25182  
 A/C TAPE

PAGE NO. 1  
REPORT NO. 1  
MODEL NO. H-46E/ Glass E/12  
FLT No. 5LP-1 X 163  
TOW 21,500 TOWG 22,47

PILOT RECDN	BATCH FLIGHT	START	STOP	MVHS	MANEUVER	DESCRIPTION	PILOT IATS	NORMAL 14s	SPECIFIC TIME	FUEL 1900#
		TIME	TIME	CODE						
No.	No.	HH:MM:SS.	HH:MM:SS.							
2	1	09:55:41	09:56:00	2615	LEFT TURN 30°	90	32	"	"	PILOT
3	2	09:56:20	09:56:40	2616	RIGHT " 30°	90	"	"	"	
4	3	09:57:16	09:57:34	2615	LEFT " 45°	90	"	"	"	
5	4	09:57:45	09:58:02	2616	RIGHT " 45°	90	"	"	"	
6	5	09:59:15	09:59:27	2615	LEFT " 60°	90	"	"	"	
7	6	09:59:38	09:59:50	2616	RIGHT " 60°	90	"	"	"	
8	7	10:00:40	10:00:47	2801	CYCLOPES 105°	130	"	"	"	
9	8	10:04:38	10:04:48	0100	LEVEL FLIGHT V4	133	"	"	"	
10	9	10:06:10	10:06:22	2900	SHM PULLUP DIVE	155	"	"	"	1025G
11	10	10:08:40	10:08:58	2900	" "	160	"	"	"	1030G
12	11	10:18:05	10:18:22	2900	" "	165	"	"	"	1035G
13	12	10:21:00	10:21:21	2900	" "	170	"	"	"	1030
14	13	10:25:07	10:25:07	3404	LAT CNT REV.	0	2K	"	"	07-03-61-29
15	14	10:25:13	10:25:17	3404	" "	0	"	"	"	07-19-13-22
16	15	10:25:20	10:25:24	3404	" "	0	"	"	"	07-24-66-22
17	16	10:25:27	10:25:31	3401	LONG "	0	"	"	"	53-74-40-62
18	17	10:25:34	10:25:38	3407	DIGEST "	0	"	"	"	53-36-66-33
19	18	10:29:17	10:29:23	0100	LEVEL FLIGHT	130	"	"	"	
20	19	10:29:40	10:29:45	0113	" "	130	"	"	"	MANEUVR
21	20	10:30:29	10:30:34	0113	" "	V4	139	"	"	
22	21	10:30:53	10:30:58	3200	FULL PULLUP DIVE	150	"	"	"	
23	22	10:32:14	10:32:23	3200	" "	160	"	"	"	

PREPARED BY: H. STEINMANN  
CHECKED BY:  
DATE: 10-6-77

**DATA REQUEST EDIT TIMES**  
**BOEING VERTOL COMPANY**  
A DIVISION OF THE BOEING COMPANY

PAGE NO.

1041

MODEL NO. H-46E/1965-  
FIT No. SLP-1 X 107  
TOGW TOCG 107

EDITED FROM: ~~DATA ANALYSIS TO DETERMINE MIGRATORY STATIONARY AND TRANSIENT~~ TABLES 1/2

PILOT RECORDED	WATCH	START	STOP	MIN	CODE	MANEUVER	DESCRIPTION	PILOT IAS	FUEL	2300	#
		TIME	TIME	MIN							
No.	No.	HH:MM:SS	HH:MM:SS	.							
		FLIGHT X164	TOGW	23,700	CG	13.5° FWD	Fuel	2300	#	FL DATE 10-5-77	
1*	1	13:06:00	13:05:00	0000	STATIC TEST	RECORD	(3 Min)				
2	2	13:25:46	13:25:51	0100	LEVEL FLIGHT VH	125					
3	3	13:30:54	13:31:07	3000	ROLLING PICKUP VH	90	LF = 1.55				
4	4	13:33:03	13:33:14	3000	"	90	1.70	243 T-1E.			
5	5	13:35:50	13:36:05	3000	"	90	1.80				
6	6	13:44:04	13:44:09	2937	AIR PICKUP Vne-S	140					
7	7	13:56:17	13:56:35	2937	" "	142	LF 2.0				
8	8	14:00:45	14:00:55	2937	" "	140	2.23				
9	9	14:04:40	14:04:50	2937	" "	140	2.25				
10	10	14:08:22	14:08:31	2937	" "	138	2.20				
11*	11	14:12:45	14:12:55	2937	" "	150	2.20				
		FLIGHT X165	TOGW	23,700	CG	0.5° A	Fuel	2300	#	FL DATE 10-5-77	
1*	1	15:57:00	16:06:54	1000	FLAT PITCH		(6 Min)				
2*	2	16:06:55	16:11:48	0100	LEVEL FLIGHT VH	125	(4 Min)				
3	3	16:11:52	16:12:02	2900	SIM. PICKUP Vne-S	124	LF 1.50	SIMWT.			
4	4	16:15:45	16:15:55	2700	" "	124	1.50	"			
5	5	16:19:17	16:19:27	2700	" "	124	1.65	"			
6	6	16:23:49	16:23:57	2700	" "	124	1.75	PANE 5011			
7	7	16:29:10	16:29:20	2700	" "	124	1.75	"			
8	8	16:32:07	16:32:22	2700	" "	124	-	M.I.D. LONG			
9	9	16:37:12	16:37:27	2700	" "	124	1.82	PASED			
10*	10	16:54:50	16:54:55	0000	STATIC TEST	RECORD					
		FLIGHT X166	TOGW	21,500	CG	9.7° A	Fuel	2300	#	FL DATE 10-6-77	
1*	1		1000		FLAT PITCH						
2	2	09:20:19	09:20:24	0100	LEVEL FLIGHT VH	133					
3	3	09:26:50	09:27:05	2937	AIR PICKUP Vne-S	141	LF 2.5				
4	4	09:32:11	09:32:26	2937	" "	152	2.65				
5	5	09:41:06	09:41:11	0100	LEVEL FLIGHT	120	Aut. TRIM				
6	6	09:42:03	09:42:08	0100	" "	130	"				
7	7	09:42:51	09:42:56	0100	" "	VH	135	"			
8	8	09:43:27	09:43:33	0100	" "	Vne	145	"			
9	9	09:44:34	09:44:39	0113	" "		130	MAN. FWD TRIM			
10	10	09:45:16	09:45:21	0113	" "	VH	137	"			
11	11	09:45:49	09:45:54	0113	" "	Vne	145	"			
12*	12	09:45:48	09:45:53	0000	STATIC TEST	RECORD	-	2 Tires			
		FLIGHT X167	TOGW	25000*	CG	4.35° FWD	Fuel	2300	#	FL DATE 10-6-77	
1*	1	13:16:15	13:16:20	0000	STATIC TEST	RECORD	-				
3*	3	13:16:25	13:16:30	0828	ROTOR STRAIGHT						
4*	4	13:19:35	13:19:45	1400	JUMP TAKEOFF						
5*	5	13:28:50	13:29:00	0100	LEVEL FL VH	121					
6	6	13:36:47	13:36:53	2900	SIM. PICKUP Vne-S	116	LF 1.5	COLD			
7	7	13:38:34	13:38:41	2900	" "	116	1.62	"			
8	8	13:40:14	13:40:24	2900	" "	115	1.70	"			
9	9	13:42:39	13:42:49	2900	" "	116	1.75	LONG			
10	10	13:45:54	13:46:09	2900	" "	119	1.80	Phase 2			
11	11	13:50:53	13:51:01	2616	RT TURN 45°	81	OPR. R. 100%				
12	12	13:51:12	13:51:21	2615	LT "	81	" "				
13	13	13:51:59	13:52:07	2616	RT "	81	" "				
15	15	14:03:45	14:04:00	0900	BRAKED ROTOR	SHUTDOWN.					

PREPARED BY: *HL Steinmann*  
 CHECKED BY:  
 DATE: 10-26-77  
 For Date 10-12-77

DATA REQUEST Edit Times  
 BOEING VERTOL COMPANY  
 A DIVISION OF THE BOEING COMPANY

Edited From:  REEL TAPE  
 A/C TAPE

PAGE NO. 1 OF 1

REPORT NO.

MODEL NO. H-46E / ~~46~~ 673L  
 Fit No. SLP-1 X 172  
 TOGW 21,500 TDCG 774

Fuel 2350

Pilot Record	Event	BATCH	START	STOP	MVNR				
		TIME	TIME	CODE	MANEUVER	DESCRIPTION	Pilot Type	Normal H	
No.	No	HH:MM:SS	HH:MM:SS						
1	1	14:53:00	14:53:05	0000	STATE TEST RE				
2	2	15:03:47	15:03:54	0100	LEVEL FLIGHT		30	2K	
3	3	15:04:53	15:05:00	0100	" "		60	"	
4	4	15:06:12	15:06:19	0100	" "		90	"	
5	5	15:07:40	15:07:47	0100	" "		115	"	
6	6	15:09:31	15:09:51	0100	" "		130	"	
7	7	15:17:29	15:17:35	0100	" "		25	6K	
8	8	15:18:46	15:18:53	0100	" "		50	"	
9	9	15:19:29	15:19:36	0100	" "		75	"	
10	10	15:21:12	15:21:19	0100	" "		100	"	
11	11	15:22:59	15:23:06	0100	" "		125	"	
12	12	15:24:40	15:24:47	0100	" "		128	"	
13	13	15:26:01	15:26:08	2800	FULL PWR DIVE		136	"	
14	14	15:27:30	15:27:53	2615	LT TURN 30° MLD		75	"	
15	15	15:29:51	15:28:15	2616	RT " "		75	"	
16	16	15:28:34	15:28:55	2616	RT " 45° OPER		75	"	
17	17	15:28:56	15:29:21	2615	LT " "		75	"	
18	18	15:29:55	15:30:14	2801	Cyclic Pickup 1.4g		75	"	
19	19	15:31:02	15:31:27	2615	LT TURN 30° MLD		38	"	
20	20	15:31:28	15:31:53	2616	RT " "		38	"	
21	21	15:33:10	15:33:29	2801	Cyclic Pickup 1.4g		113	"	
22	22	15:34:15	15:34:26	2801	" " 1.55g		113	"	
23	23	15:35:07	15:35:49	2615	LT TURN 30° MLD		113	"	
24	24	15:35:50	15:36:12	2616	RT " "		113	"	
25	25	15:36:35	15:36:53	2615	LT " " OPER		113	"	
26	26	15:36:59	15:39:16	2616	RT " "		113	"	
27	27	15:39:51	15:39:58	0100	LEVEL FLIGHT		130	2K	
28	28	15:40:59	15:41:06	0100	" " 1.4g		135	"	
29	29	15:41:49	15:41:56	3200	FULL PWR DIVE 1.4g		146	"	
30	30	15:43:20	15:43:48	3200	" " 1.15g		162	"	
31	31	15:44:59	15:45:15	2615	LT TURN 30° MLD		88	"	
32	32	15:45:16	15:45:35	2616	RT " "		88	"	
33	33	15:45:51	15:46:11	2616	RT " 45° OPER		88	"	
34	34	15:46:12	15:46:33	2615	LT " "		88	"	
35	35	15:47:33	15:49:42	2801	Cyclic Pickup 1.5g		88	"	
36	36	15:48:40	15:49:02	2616	RT TURN 30° MLD		44	"	
37	37	15:49:03	15:49:27	2615	LT " "		44	"	
38	38	15:49:59	15:50:12	2615	LT " 45° OPER		44	"	
39	39	15:50:14	15:50:30	2616	RT " "		44	"	
40	40	15:51:38	15:51:50	2801	Cyclic Pickup 1.4g		131	"	
41	41	15:51:51	15:52:01	2801	" " 1.55g		131	"	
42	42	15:52:10	15:52:25	2615	LT TURN 30° MLD		131	"	
43	43	15:52:27	15:52:41	2616	RT " "		131	"	
44	44	15:53:07	15:53:25	2616	RT " " OPER		131	"	
45	45	15:53:27	15:53:42	2615	LT " "		131	"	

PREPARED BY: H. STEINBERG  
CHECKED BY:  
DATE: 10-27-77  
Re: Jane 10-13-77

DATA REQUEST EDIT Tapes  
BOEING VERTOL COMPANY  
A DIVISION OF THE BOEING COMPANY  
Edited From:  A/C TAPE  REEL TAPE

PAGE NO. 1 of 1

REPORT NO.

### METAL

MORE! NO

MODEL NO. H-406, ~~2000~~  
FIT NO. 56P<sub>2</sub>1 X 123  
TOGW 21500 TOCG 9.7A

TOGW 21500 TOCG 9.78

Fuse 2300<sup>+</sup>

Fig. 2300

PROT RECORD	BATCH EVENT	START	STOP	MNUC	MANEUVER	DESCRIPTION	PILOT IAS(m)	NAME HD
		TIME	TIME	CODE				
No.	No.	HH:MM:SS.S	HH:MM:SS.S					
1	1			0000	STATIC	TEST REC	123	
2	2	09:30:42	09:30:43	0100	LEVEL FLIGHT		109	GR
3	3	09:31:53	09:32:07	0100	" "	Vne	123	"
4	4	09:32:35	09:33:11	3334	GUST SIMULATION		123	"
5	5	09:34:13	09:34:20	0100	LEVEL FLIGHT Vn		128	"
6	6	09:34:42	09:34:50	3334	GUST SIMULATION		128	"
7	7	09:35:13	09:35:20	3200	FULL POWER DIVE		135	"
8	8	09:38:13	09:38:20	0100	LEVEL FLIGHT		109	"
9	9	09:38:37	09:38:53	3334	GUST SIMULATION		109	"
10	10	09:40:39	09:40:46	0100	LEVEL FLIGHT Vn		123	"
11	11	09:43:31	09:43:53	3334	GUST SIMULATION		123	"
12	12	09:44:31	09:44:38	0100	LEVEL FLIGHT Vn		128	"
13	13	09:45:01	09:45:14	3334	GUST SIMULATION		128	"
14	14	09:45:38	09:45:48	3200	FULL POWER DIVE		135	"
15	15	09:49:00	09:49:07	0100	LEVEL FLIGHT, Vn		123	3.5K
16	16	09:49:20	09:49:38	3334	GUST SIMULATION		123	"
17	17	09:50:35	09:50:42	0100	LEVEL FLIGHT Vn		135	"
18	18	09:50:53	09:51:01	—	VnD		—	44
19	19	09:51:28	09:51:50	3334	GUST SIMULATION		135	"
20	20	09:52:16	09:52:23	3200	FULL POWER DIVE Vne		139	"
21	21	09:52:40	09:52:58	3334	GUST SIMULATION		139	"
22	22	09:53:55	09:54:04	3200	FULL POWER DIVE VnVne		155	"
23	23	09:55:40	09:55:47	0100	LEVEL FLIGHT Vn		130	2K
24	24	10:03:18	10:03:25	0100	" "	"	130	"
25	25	10:03:39	10:03:56	3334	GUST SIMULATION		130	"
26	26	10:14:43	10:04:50	0100	LEVEL FLIGHT Vn		136	"
27	27	10:05:04	10:05:13	3334	GUST SIMULATION		136	"
28	28	10:05:43	10:05:50	3200	FULL POWER DIVE Vne		146	"
29	29	10:06:06	10:06:15	3334	GUST SIMULATION		146	"
30	30	10:06:52	10:07:00	3200	FULL POWER DIVE VnVne		165	"
31	31	10:09:52	10:09:59	0100	LEVEL FLIGHT Vn		130	"
32	32	10:10:12	10:10:28	3334	GUST SIMULATION		130	"
33	33	10:11:08	10:11:16	0100	LEVEL FLIGHT Vn		136	"
34	34	10:11:37	10:11:54	3334	GUST SIMULATION		136	"
35	35	10:12:55	10:13:02	3200	FULL POWER DIVE Vne		146	"
36	36	10:13:14	10:13:24	3334	GUST SIMULATION		146	"
37	37	10:15:01	10:15:06	3200	FULL POWER DIVE		164	"
38	38	10:15:07	10:15:18	3220	DIVE RECOVERY		164	"
39	39	10:22:21	10:22:31	2200	FLARE TO HANGAR		—	—

PREPARED BY: HHS/CE/MA/IN  
CHECKED BY:  
DATE: 10-27-77  
10-27-77

DATA REQUEST EDIT TIMES  
BOEING VERTOL COMPANY  
A DIVISION OF THE BOEING COMPANY

Edited From:  READING  
 A/C TAPE

Editor First: John L. Gandy

PAGE NO. 10 of 1

REPORT NO.

MODEL NO. H-46E/G/255 Blaw  
FIT No. SLP-1 X 179  
TOGW 21500 TOCG 222

BATCH		START	STOP	MVNR						Fuel 23
Pilot	Event	TIME	TIME	CODE	MANEUVER DESCRIPTION					
No.	No.	HH:MM:SS	HH:MM:SS		Pilot	Time	Normal	Alt		
1	1			0000	STANDBY					
2	2			0828	ROTOR START - MAX RATE					
3	3	13:12:19	13:12:25	0100	LEVEL FLIGHT Vee	109	6K			
4	4	13:13:26	13:13:44	0100	" " Vne	123	"			
5	5	13:15:07	13:15:13	0100	" " VH	127	"			
6	6	13:15:36	13:15:43	3334	GUST SIMULATION	127	"			
7	7	13:17:00	13:17:15	3200	FULL POWER DIVE 1.1Vne	135	"			
8	8	13:18:12	13:18:32	2615	LT. TURN 30° MOD	113	"			
9	9	13:18:46	13:19:01	2615	LT. " " OPER.	113	"			
10	10	13:20:05	13:20:15	0100	LEVEL FLIGHT Vee	109	"			
11	11	13:21:05	13:21:15	0100	" " Vne	123	"			
12	12	13:21:55	13:22:02	0100	" " VH	127	"			
13	13	13:22:15	13:22:23	3334	GUST SIMULATION	129	"			
14	14	13:22:45	13:22:55	3200	FULL POWER DIVE	135	"			
15	15	13:24:16	13:24:22	0600	AIR STADY	70	From 7K			
16	16	13:24:23	13:24:38	2637	AIR LEFT TURN	70	"			
17	17	13:24:39	13:24:52	2637	AIR RIGHT TURN	70	"			
18	18	13:24:53	13:25:26	0423	SPIN DESCENT, LT.	70	"			
19	19	13:27:06	13:27:19	0100	LEVEL FLIGHT Vee	123	3.5K			
20	20	13:28:00	13:28:16	0100	" " VH	133	"			
21	21	13:28:28	13:28:38	3334	GUST SIMULATION	133	"			
22	22	13:29:06	13:29:16	3200	FULL POWER DIVE Vne	138	"			
23	23	13:29:35	13:29:50	3200	" " " 1.1Vne	150	"			
24	24	13:33:00	13:33:06	0100	LEVEL FLIGHT Vee	130	2K			
25	25	13:33:52	13:34:00	0100	" " VH	135	"			
26	26	13:34:22	13:34:29	3200	FULL POWER DIVE Vne	146	"			
27	27	13:35:40	13:35:45	3200	" " "	155	"			
28	28	13:37:06	13:37:17	2615	LT TURN 45° OPER.	88	"			
29	29	13:37:18	13:37:27	2616	RT " " "	88	"			
30	30	13:38:00	13:38:10	2615	LT TURN 60° OPER.	88	"			
31	31	13:38:18	13:38:26	2616	RT " " "	88	"			
32	32	13:39:27	13:39:37	2616	RT TURN 45° OPER	44	"			
33	33	13:39:40	13:39:50	2615	LT " " "	44	"			
34	34	13:41:20	13:41:30	2616	RT TURN 30° OPER	131	"			
35	35	13:41:32	13:41:38	0100	LEVEL FLIGHT @ GUST	131	"			
36	36	13:42:11	13:42:17	2810	COLL. PULLUP 1.6g	131	"			
37	37	13:43:30	13:43:40	0100	LEVEL FLIGHT Vee	130	"			
38	38	13:44:11	13:44:19	0100	" " VH	135	"			
39	39	13:44:48	13:44:58	3200	FULL POWER DIVE 1.1Vne	160	"			
40	40	13:47:20	13:47:32	0100	LEVEL FLIGHT Vee	123	3.5K			
41	41	13:48:08	13:48:16	0100	" " VH	133	"			
42	42	13:48:28	13:48:42	1900	ACCEL TO DIVE	138-155	"			
43	43	13:48:43	13:48:48	3200	FULL POWER DIVE 1.1Vne	155	"			
44	44	13:48:49	13:48:58	3220	DIVE RECOVERY	158-145	"			
45	45	13:54:00		2200	TURN TO HOVER	60-0	-			
46	46			0900	BRAKED ROTOR STOP	-				

PREPARED BY: H. STEINMANN  
CHECKED BY:  
DATE: 12-12-77

DATA REQUEST EDIT TIMES  
BOEING VERTOL COMPANY  
A DIVISION OF THE BOEING COMPANY

Edited From:  REC TAPE  
 A/C TAPE

PAGE NO.  
REPORT NO.

MODEL NO. H-46E/Glass Blac  
FIT NO. SLP-1 X 186  
TOGW 13,920 TOCG 0.97A

PILOT RECDN	BATCH EVENT	START	STOP	MNR				
		TIME	TIME	CODE	MANEUVER	DESCRIPTION	Pilot IAS	
No.	No.	HH:MM:SS	HH:MM:SS					
2	2	08:48:05	08:48:55	0100	LEVEL FLIGHT		140/44	
3	3	08:57:40	08:52:00	0100	"		140	
4	4	08:54:35	08:54:55	0100	"		130	
5	5	08:55:49	08:56:09	0100	"		110	
6	6	08:58:50	08:59:10	0100	"		130	
7	7	09:00:00	09:00:20	0100	"		110	
8	8	09:02:10	09:02:30	0100	"		90	
9	9	09:03:19	09:03:39	0100	"		70 1/4	
10	10	09:04:30	09:04:50	0100	"		50	
11	11	09:05:45	09:06:05	0100	"		30	
12	12	09:09:55	09:10:15	0100	"		90	
13	13	09:11:05	09:11:25	0100	"		70 1/2	
14	14	09:12:15	09:12:35	0100	"		51	
15	15	09:13:20	09:13:40	0100	"		30	
16	16	09:17:20	09:17:40	3200	FULL POWER DIVE		160	
17	17	09:20:59	09:21:19	3200	"		161	
18	18	09:24:45	09:25:05	0600	A/R STEADY		109	
19	19	09:26:15	09:26:35	0300	CLIMB @ 1000 fpm		70	
20	20	09:27:15	09:27:35	0300	MAX PWR CLIMB		90	
21	21	09:29:35	09:29:55	0600	A/R STEADY		110	
22	22	09:31:05	09:31:25	0300	CLIMB @ 1000 fpm		87 1/2	
23	23	09:33:50	09:34:10	0600	A/R STEADY		128	
24	24	09:38:37	09:38:57	0600	A/R STEADY		130	
25	25	09:40:10	09:40:30	0300	MAX PWR CLIMB		90	
26	26	09:42:50	09:43:10	0600	A/R STEADY		150	
27	27	09:44:28	09:44:48	0300	CLIMB @ 1000 fpm		70	
28	28	09:47:55	09:48:15	0600	A/R STEADY		150	
29	29	09:51:32	09:51:52	0300	CLIMB @ 500 fpm		70	
30	30	09:52:30	09:52:50	0300	CLIMB @ 500 fpm		90	
31	31	09:53:35	09:53:55	0300	MAX PWR CLIMB		71 1/2	
32	32	09:58:32	09:58:52	0300	CLIMB @ 500 fpm		89	
33	33	09:59:23	09:59:43	0300	CLIMB @ 500 fpm		70	
34	34	10:00:15	10:00:35	0300	CLIMB @ 1000 fpm		70	
35	35	10:01:20	10:01:40	0300	MAX PWR CLIMB		70	
36	36	10:04:44	10:04:48	2810	C/P PULLUP		100	
37	37	10:05:16	10:05:20	2810	C/P PULLUP		100	
38	38						1.7	
							1.9	

NOTE: BATCH EVENT Numbers 2 thru 35 correspond with NATC Calibration Range Run Numbers

PREPARED BY: H. Steimann  
CHECKED BY:  
DATE: 12-7-77

DATA REQUEST EDIT TIMES  
BOEING VERTOL COMPANY  
A DIVISION OF THE BOEING COMPANY

PAGE NO.  
REPORT NO.

MODEL NO. H-46E/Glass Blade  
FIT NO. SLP-1 X  
TOGW \_\_\_\_\_ TOCG \_\_\_\_\_

Edited From:  Real Time

A/C TAPE (Stuck - can Dem)

PILOT RECENT EVENT	START	STOP	MIN/MAX					
	TIME	TIME	CODE	MANEUVER DESCRIPTION				
	11:00:00	11:59:59						
FLIGHT	X-188	TOGW: 21500	CG: 22.3 F	51' M. PULLUP @ VH				
1 1	07:53:51	07:53:56	0000	STATIC TEST				
2 2	08:08:55	08:09:00	0100	LEVEL FLT @ VH	140 KTS CAS	3300' HD		
3 3	08:33:10	08:33:29	2900	SYM PU VDL	158-164 KTS CAS	3050' HD	1.35°	
4 4	08:36:55	08:37:22	2900	EP SYM PU VLC	157-171 KTS CAS	3350' HD	1.52°	
5 5	08:43:31	08:43:36	0100	LEVEL FLT @ VCR	132 KTS CAS	3150' HD		
FLIGHT	X-189	TOGW: 23700	CG: 13.4 F	ROLLING, GULLS - 5 A/R PULLUP				
1 1	13:08:20	13:08:25	0000	STATIC TEST				
2 2	13:20:38	13:20:48	3000	ROLL P.U.	84-69 KTS CAS	2500' HD	1.35°	
3 3	13:23:47	13:23:57	3000	EP ROLL P.U.	87 KTS CAS	2900' HD	2.05°	
5 5	13:42:19	13:42:34	2937	A/R P.U.	128 KTS CAS	2750' HD	2.25°	
6 6	13:48:55	13:49:14	2937	EP AIR P.U.	133 KTS CAS	3150' HD	2.35°	
FLIGHT	X-190	TOGW: 23700	CG: 0.5 A	SYMM. PULLUP @ VH				
1 1	07:41:39	07:41:43	0000	STATIC TEST				
2 2	07:43:30	07:45:45	0828	ENG START & ACCEL				Noise:
3 3	07:58:15	07:58:20	0100	LEVEL FLT @ VH	130 KTS CAS	3300' HD		
5 5	08:07:23	08:07:30	2900	SYM PU VH	127 KTS CAS	3100' HD	1.75°	Noise:
6 6	08:12:36	08:12:59	2900	EP SYM PU VH	130 KTS CAS	3000' HD	1.75°	Noise:
FLIGHT	X-192	TOGW: 24745	CG: 5.1 F	SYMM PULLUP @ VH				
1 1	00:01:20	00:01:24	0000	STATIC TEST				
3 3	13:23:20	13:23:35	0100	LEVEL FLT @ VH	122/128 KTS CAS	3200' HD	1.95 G, +	
5 5	13:28:07	13:28:12	2900	SYM PU VH	121 KTS CAS	3000' HD	1.75°	
6 6	13:32:54	13:33:08	2900	SYM PU VH	124 KTS CAS	3050' HD	1.80°	
7 7	13:39:16	13:39:30	2900	EP SYM PU VH	123 KTS CAS	3100' HD	1.85°	
FLIGHT	X-193	TOGW: 21500	CG: 9.5 A	AIR PULLUP				
1 1	09:56:25	09:56:28	0000	STATIC TEST				
2 2	10:12:45	10:12:52	2937	A/R PU	126 KTS CAS	2900' HD	2.55°	
3 3	10:15:32	10:15:42	0100	LEVEL FLT @ VH	132 KTS CAS	3350' HD	1.85 GUST	
4 4	10:20:35	10:20:55	2937	A/R PU	140 KTS CAS	3200' HD	2.50°	
5 5	10:25:55	10:26:10	2937	A/R PU	141 KTS CAS	3300' HD	2.50°	
6 6	10:31:50	10:32:05	2937	EP A/R PU	144 KTS CAS/151 TAS	3350' HD	2.75°	Noise:

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